DIRECTORY of Field Activities of the Bureau of Plant Industry

Miscellaneous Publication
No. 64

United States
Department of Agriculture
Bureau of Plant Industry

ORGANIZATION OF THE BUREAU OF PLANT INDUSTRY

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Biophysical Laboratory.—G. N. Collins, Principal Botanist, in charge.
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Cotton, Rubber, and Other Tropical Plants.—O. F. Cook, Principal Botanist, in charge.
Drug and Related Plants.—W. W. Stockberger, Principal Physiologist, in charge.
Dry-Land Agriculture.—E. C. Chilcott, Principal Agriculturist, in charge.
Egyptian Cotton Breeding.—T. H. Kearney, Principal Physiologist, in charge.
Fiber Plants.—L. H. Dewey, Senior Botanist, in charge.
Forage Crops and Diseases.—R. A. Oakley, Principal Agronomist, in charge.
Foreign Plant Introduction.—K. A. Ryerson, Principal Horticulturist, in charge.
Forest Pathology.—Haven Metcalf, Principal Pathologist, in charge.
Gardens and Grounds.—J. W. Byrnes, Assistant, in charge.
Horticultural Crops and Diseases.—E. C. Auchter, Principal Horticulturist, in charge.
Mycology and Disease Survey.—C. L. Shear, Principal Pathologist, in charge.
Nematology.—N. A. Cobb, Principal Nematologist, in charge.
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Seed Laboratory.—Edgar Brown, Principal Botanist, in charge.
Sugar Plants.—E. W. Brandes, Principal Pathologist, in charge.
Tobacco and Plant Nutrition.—W. W. Garner, Principal Physiologist, in charge.
Western Irrigation Agriculture.—C. S. Scofield, Principal Agriculturist, in charge.

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THE ACTIVITIES of the Bureau of Plant Industry are primarily devoted to agricultural research and related experiments, although incidental service, regulatory and extension work, is also under way. The scope of its researches includes the study of destructive plant diseases and the establishment of methods for eradication and control; the improvement of crop, ornamental, and other economic plants by breeding and selection; the introduction of promising seeds and plants from foreign countries; the improvement of methods of plant production; and the utilization of plants of economic value.

The field activities and field stations of the bureau, as distinguished from the laboratory, administrative, and directive work conducted in Washington, may be grouped under three general heads: (1) That carried on in various parts of the country on land owned by the Government and used and controlled by the bureau, (2) that conducted on land rented by the bureau, and (3) that carried on where land and other facilities are provided as part of a joint cooperative plan. The last line of work is conducted, for the most part, in cooperation with the State experiment stations.

Practically every major project of the bureau has its ramifications in one or more of the three groups of field activities. In fact, it is safe to say that fully 60 per cent of all the investigative work is in the field, as distinguished from that carried on in the laboratories in Washington.

DIRECTORY OF FIELD ACTIVITIES OF THE BUREAU OF PLANT INDUSTRY

The field stations of the Bureau of Plant Industry are shown in boldface type, and the other activities of the bureau in field and laboratory, usually in cooperation with a State, appear in italic. Italics are also used to designate offices or projects of the bureau under which certain lines of work at stations are conducted. The locations are shown on the map, Figure 1 (following p. 53).

ALABAMA

Mobile

Citrus Canker Eradication Field Office.—Address, P. O. Box 1664. Direction of local activities in the eradication of citrus canker in Alabama. J. W. Pace, chief inspector, in charge.

Silverhill

Cooperative tests of canker-resistant citrus stocks and new hardy and early maturing strains of Satsuma oranges, conducted by *Office of Horticultural Crops and Diseases.* On property of O. F. E. Winberg, three-fourths mile southeast of Silverhill, Mr. Winberg having local supervision of the work. Rail connections at Bay Minette on the Louisville & Nashville Railroad to Robertsdale.

ARIZONA

Sacaton

United States Field Station.—On Pima Indian Reservation, 15 miles north of Casa Grande railroad station. Automobile stages leave Casa Grande for Sacaton at 10 and 11 a. m. Accessible also via Tucson-Phoenix main line (Picacho, Phoenix-Wellton Division) of the Southern Pacific Railroad. Flag stop for through passengers Oldberg, 5 miles east, or Chandler, 20 miles north of Sacaton. Transportation arrangements may be made in advance by wiring C. J. King at Casa Grande or by writing him at Sacaton. Telephone, Casa Grande 60–2.

Biophysical Laboratory.—Investigations in maize-breeding methods; studies on root rot and water requirement of cotton and alfalfa and on alkali resistance of maize. Work directed from Washington, D. C.; local supervision by C. J. King, agronomist and superintendent.

Cereal Crops and Diseases.—Experiments with introduced wheat, barley, oats, and grain sorghums to determine varietal identity, spring and winter habit, and freedom from destructive diseases; varietal comparisons of barley in the nursery, and genetic studies on fundamental problems of inheritance in barley; physiologic studies of tissue fluids of grain sorghums. Work directed from Washington, D. C.; local supervision by C. J. King, agronomist and superintendent.

Cotton, Rubber, and Other Tropical Plants.—Acclimatization and adaptation investigations, with special reference to cotton, dates, pomegranates, and other crop plants likely to prove of value to the Indians on the Pima Reservation. C. J. King, agronomist and superintendent, in charge.

Egyptian Cotton Breeding.—Egyptian cotton-breeding investigations. G. J. Harrison, associate agronomist, in charge.

Horticultural Crops and Diseases.—Field tests of date palms, pistache nuts, and citrus fruits, with special reference to date growing and the determination of the varieties most likely to prove commercially successful in Arizona. Work directed by W. T. Swingle, principal physiologist; local supervision by R. H. Peebles, senior scientific aid.

Superior

Boyce Thompson Southwestern Arboretum (cooperative investigations).—Arboretum is located about 3 miles west of Superior, which is on the Magma Arizona Railroad, 25 miles west of Globe, Ariz. Best reached from either Phoenix or Globe by bus which passes the arboretum, and passengers may leave the bus there rather than at Superior.

Forage Crops and Diseases.—Tests of newly introduced grasses and other forage plants to determine their value and adaptation to range conditions in the Southwest. Work directed from Washington, D. C.; local supervision by F. J. Crider, director of the Southwestern Arboretum.

Tucson

State Agricultural Experiment Station (cooperative investigations).—May be reached by street car.

Western Irrigation Agriculture.—Investigations of quality of irrigation water and subsoil and drainage waters in relation to the alkali problem and to sustained production on irrigated lands, particularly Government reclamation projects. J. F. Breazeale, senior biochemist, in charge.

ARKANSAS

Fayetteville

State Agricultural Experiment Station (cooperative investigations).—Within walking distance of the station of the St. Louis-San Francisco Railway. It is visible on the heights above the station. Telephone.

Cereal Crops and Diseases.—Research on diseases of rice, including stem rot, straighthead, leaf spots, and seedling diseases. E. C. Tullis, agent and assistant pathologist, in charge. Room 225, Agricultural Building. Telephones 185; or 1360, branch 40.

Horticultural Crops and Diseases.—Investigations on peach bacterial spot, brown rot and scab, apple leaf spots and apple blotch; also new fungicides for the control of fruit diseases. J. C. Dunegan, associate pathologist, in charge. Room 225, Agricultural Building.

Stuttgart

Rice Branch Station, Agricultural Experiment Station (cooperative investigations).—Take Highway 30, 1 mile south and 8 miles east of Stuttgart, which is reached on the Chicago, Rock Island & Pacific and St. Louis Southwestern Railways.

Cereal Crops and Diseases.—Rice disease investigations, being the field phases of the studies recorded under Fayetteville. E. C. Tullis, agent and assistant pathologist, in charge. (At Stuttgart only in summer.) Telephone, 9501 F–11.

CALIFORNIA

Bard

United States Acclimatization Garden.—On the Bard Mesa, 13 miles northeast of Yuma, Ariz., railroad station (Southern Pacific) and

5 miles northeast of Bard post office. Stage from Yuma to Bard. Telegraph address, Yuma, Ariz., mail address, Bard Calif. Transportation arrangements may be made in advance by writing or wiring R. E. Beckett.

Cotton, Rubber, and Other Tropical Plants.—Acclimatization and adaptation investigations with cotton, rubber, and other tropical crop plants. R. E. Beckett, principal scientific aid and superintendent, in charge.

United States Yuma Field Station.—Eight miles north of Yuma, Ariz., railroad station (Southern Pacific). May be reached by stage from Yuma to Bard. Telephone E. G. Noble regarding instructions for reaching farm or transportation arrangements.

Western Irrigation Agriculture.—Irrigated rotation and tillage experiments; varietal tests of alfalfa, grain sorghums, cotton, barley, wheat, and truck crops; testing and propagation of various ornamental trees and shrubs for distribution; breeding and selection of cotton and alfalfa; fertilizer tests; pasturing experiments; investigations in reclamation of alkali and sandy soils. E. G. Noble, associate agronomist and superintendent, in charge.

Berkeley

State College of Agriculture and Agricultural Experiment Station (cooperative investigations).—Located in east part of Berkeley. May be reached by street car from Berkeley station on Southern Pacific Railroad or by ferry and street car from San Francisco.

Blister Rust Control.—Cooperative control of white-pine blister rust. H. R. Offord, agent, in charge. Room 210–D, Hilgard Hall.

Cereal Crops and Diseases.—Investigations of the cytology of infection of wheat by rusts. Ruth F. Allen, pathologist, in charge. Telephone, Berkeley 7100, local 126.

Investigations of cereal smuts and methods of their control, especially varietal resistance. (The field experiments are conducted at Davis.) F. N. Briggs, associate pathologist in charge. Telephone, Berkeley 7100, local 133.

Biggs

Biggs Rice Field Station (cooperation with State Agricultural Experiment Station and Sacramento Valley Grain Association).—Four miles northwest of Biggs, which is on the Southern Pacific Railroad. Transportation arrangements may be made by communicating with J. W. Jones. Telephone, 12–F–11.

Cereal Crops and Diseases.—Rice investigations, including varietal, breeding, cultural, irrigation, and fertilizer experiments and watergrass control. J. W. Jones, senior agronomist, in charge.

Chico

United States Plant Introduction Garden.—Four miles south of Chico, which is on the Southern Pacific Railroad. May be reached by auto or by Government bus, which makes a daily trip to the station from Chico. Telephone, 312–W.

Foreign Plant Introduction.—Propagation and testing of new plant introductions. The test orchard plantings include jujubes, olives, pistache, peaches, pears, plums, persimmons, flowering cherries, almonds, nectarines, and ornamentals. J. E. Morrow, superintendent, in charge.

Horticultural Crops and Diseases.—Bulb investigations, particularly Tigridia, Hesperaloe, and Palestine iris, including studies of habits of growth, methods of culture, propagation, handling, curing, and adaptability to conditions. Work directed from Washington, D. C.; local supervision by J. E. Morrow, superintendent.

Grape investigations, including propagation and studies of varieties, habits of growth, characteristics and merits of fruit and adaptability. Work directed from Washington, D. C.; local supervision by F. L. Husmann, superintendent, Napa.

Chula Vista

United States Vegetable Disease Field Laboratory.—In office building of Orchard Operating Co., Third Avenue and K Street. Reached by Chula Vista bus from San Diego in one-half hour.

Horticultural Crops and Diseases.—Investigation of diseases of lettuce, melons, celery, and other vegetables, especially breeding of disease-resistant strains, including field trials in Imperial Valley. I. C. Jagger, senior pathologist, in charge.

Cloverdale

Cooperative grape experiments, including studies of varietal adaptability and of the adaptability of resistant stocks to different soils and congeniality with different varieties, conducted by *Office of Horticultural Crops and Diseases.* On property of J. W. Hill, 2 miles north of Cloverdale, which is on the Northwestern Pacific Railway. May be reached by auto. Work directed from Washington, D. C.; local supervision by F. L. Husmann, superintendent, Napa.

Colfax

Cooperative grape experiments, including studies of varietal adaptability and of the adaptability of resistant stocks to different soils and congeniality with different varieties, conducted by *Office of Horticultural Crops and Diseases.* On property of Mrs. Louis Cortopassi, 1 mile southwest of railroad station (Southern

Pacific). May be reached by auto. Work directed from Washington, D. C.; local supervision by F. L. Husmann, superintendent, Napa.

Davis

University Farm (cooperative investigations).—About 1 mile from Southern Pacific Railroad station. Bus line available to farm, or transportation arrangements may be made in advance by communicating with the superintendent. Davis may be reached from Sacramento by busses of the California Transit Co. and the River auto stage at frequent intervals.

Cereal Crops and Diseases.—Agronomic experiments with wheat, oats, and barley, including varietal comparisons, breeding experiments, and genetic studies. G. A. Wiebe, assistant agronomist, in charge. Telephone 22–R. (Investigations of cereal smuts are conducted by F. N. Briggs from Berkeley.)

Elk Grove

Cooperative grape experiments, including studies of varietal adaptability and of the adaptability of resistant stocks to different soils and congeniality with different varieties, conducted by *Office of Horticultural Crops and Diseases*. On property of Colonial Grape Products Co., about two blocks from Southern Pacific Railroad station. Work directed from Washington, D. C.; local supervision by F. L. Husmann, superintendent, Napa.

Fresno

United States Experiment Vineyard.—Four miles southeast of Fresno. Electric railway runs within 1½ miles of the vineyard. Mr. Snyder's headquarters may be reached by taking Recreation Park car from either Santa Fe

or Southern Pacific Railroad station, getting off at Ninth Street and walking one block north.

Horticultural Crops and Diseases.—Grape investigations. Elmer Snyder, associate pomologist, in charge. Residence, 3930 Kerckhoff Avenue. Telephone, 7695–W.

Investigations on the handling, storage, and transportation of table grapes, and studies on the removal of spray residue from peppers. W. T. Pentzer, assistant physiologist, in charge. Residence, 1717 Poplar Street.

United States Fruit Disease Field Laboratory.—2025 Del Mar Avenue (on grounds of Fresno State College). About 1½ miles from Southern Pacific Railroad station.

Horticultural Crops and Diseases.—Investigations of physiological diseases of orchards and vineyards. W. S. Ballard, senior pathologist, in charge.

Galt

Cooperative grape experiments, including studies of varietal adaptability and of the adaptability of resistant stocks to different soils and congeniality with different varieties, conducted by *Office of Horticultural Crops and Diseases.* Located on the Brick Kiln Vineyard tract (property of the Earl Fruit Co., Sacramento), one-half mile from the Southern Pacific Railroad station at Galt. Work directed from Washington, D. C.; local supervision by F. L. Husmann, superintendent, Napa.

Healdsburg

Cooperative grape experiments, including studies of varietal adaptability and of the adaptability of resistant stocks to different soils and congeniality with different varieties, conducted by *Office of Horticultural Crops and Diseases.* Located on the property of Miss

Adelma Walters Fenton, Sotoyome Rancho, on the Russian River, about 6 miles from Healdsburg, which is on the Northwestern Pacific Railroad. Work directed from Washington, D. C.; local supervision by F. L. Husman, superintendent, Napa.

Indio

Acclimatization and adaptation investigations, with particular attention to cotton breeding, conducted by *Office of Cotton, Rubber, and Other Tropical Plants* in the Coachella Valley of California. H. G. McKeever, assistant agronomist, in charge. During growing season may be reached by mail at box 121, Indio, or by telegraph, care of postmaster, Indio.

United States Experiment Date Garden.—Two miles northwest of Southern Pacific Railroad station at Indio. Automobile available to date garden; arrangements may be made by telephoning the superintendent.

Horticultural Crops and Diseases.—Experiments in growing date palms, pollination, handling of fruits, and in the breeding and testing of date varieties. Directed by W. T. Swingle; local supervision by A. J. Shamblin, associate horticulturist and superintendent.

Lamanda Park

United States Horticultural Field Laboratory.—2657 Bersa Street. Telephone, F. O. 4836. Lamanda Park is on the Atchison, Topeka & Santa Fe Railway.

Horticultural Crops and Diseases.—Investigations in fruit and vegetable transportation, handling and storage, including special studies on treatment and handling of citrus fruits, particularly oranges and grapefruit, to control blue mold and other organisms of decay; stor-

age and curing of dates; and investigations on ocean transportation of citrus fruits. W. R. Barger, associate physiologist, in charge.

Los Angeles

United States Horticultural Field Office.—601 Federal Building, 301 North Spring Street. Telephone, 884–457.

Horticultural Crops and Diseases.—Investigations in fruit and vegetable transportation, handling, and storage, including studies on precooling, especially working out of the basic principles of precooling and storing of grapes and apricots; investigations also conducted in various truck-crop sections of the country on transportation and handling of vegetables, particular attention being given in California and Oregon to the wet lading of lettuce, cauliflower, and broccoli. C. W. Mann, senior pathologist, in charge.

Oakville

United States Experiment Vineyard.—About 13 miles north of Napa and 2 miles south of Oakville, which is on the Southern Pacific Railroad.

Horticultural Crops and Diseases.—Grape investigations. F. L. Husmann, superintendent, in charge. Residence, 842 Seminary Street, Napa. Telephone, 636–J.

Palo Alto

Leland Stanford Junior University (cooperative investigations).—About 2 miles from Southern Pacific Railroad station at Palo Alto. May be reached by trolley.

Horticultural Crops and Diseases.—Fruit-breeding investigations, special attention being given to peaches, plums, apricots, and other deciduous fruits. W. F. Wight, botanist, in charge. Box 775, Palo Alto. Telephone, 1687–R.

Riverside

Citrus Experiment Station, State Agricultural Experiment Station (cooperative investigations).—About 2 miles from Riverside, which may be reached by Pacific Electric, Atchison, Topeka & Santa Fe, Southern Pacific, or Union Pacific Railroads. Take experiment-station bus leaving Riverside post office at 8.30 a. m. and 1 p. m. Telephone, 3720.

Forage Crops and Diseases.—Study of alfalfa diseases in southern California. J. L. Weimer, senior pathologist, in charge.

Horticultural Crops and Diseases.—Citrus progeny investigations in connection with fruit improvement through bud selection. A. D. Shamel, principal physiologist, in charge.

Investigation of western tomato diseases. Michael Shapovalov, pathologist, in charge.

Rubidoux Laboratory (cooperation with State Agricultural Experiment Station).—Located at Fourteenth and Pepper Streets, a short distance from railroad stations. Telephone, 490.

Western Irrigation Agriculture.—Field investigations in irrigation agriculture with special reference to the boron content of irrigation waters and in the soil solution; methods of irrigation, isolation of sources of contamination of the water supply, and other correctives designed to prevent injury to orchard crops by boron in the irrigation water, and testing of orchard crops for resistance to boron injury. F. M. Eaton, associate physiologist, in charge.

United States Horticultural Field Office.—Room 8, Federal Building, 580 West Seventh Street. Telephone, 599.

Horticultural Crops and Diseases.—Investigations in fruit improvement through bud selection. A. D. Shamel, principal physiologist, in charge.

United States Sugar Plant Field Station.—Office located in Girls' High School Building (between Lemon, Lime, Ninth, and Tenth Streets).

Sugar Plants.—Investigation of curly-top disease of sugar beets. Eubanks Carsner, senior pathologist, in charge.

Sacramento

Cooperative Seed-Testing Laboratory.—State Department of Agriculture, Capitol Extension Building. Telephone.

Seed Laboratory.—Testing agricultural seeds for mechanical purity and germination: identification of seeds of cultivated plants and weeds; testing seeds submitted in connection with enforcement of Federal seed act. R. E. Blair, collaborator, in charge; Grace M. Cole, assistant botanist.

State Department of Agriculture.—Capitol Extension Building. Telephone.

Blister Rust Control.—Cooperative control of white-pine blister rust. G. A. Root, assistant pathologist and State leader, in charge.

United States Horticultural Field Office.—Room 829 Forum Building, Ninth and K Streets. Telephone.

Horticultural Crops and Diseases.—Investigations in fruit production. C. F. Kinman, pomologist, in charge.

Nut-culture investigations. M. N. Wood, pomologist, in charge.

San Diego

United States San Diego Acclimatization Garden.—On Torrey Road (coast highway between Los Angeles and San Diego) at Torrey Pines, 6 miles north of La Jolla. Station may be reached by auto from San Diego or

by taking regular stage line from San Diego. Stages from Los Angeles or San Diego will stop at the station entrance to discharge passengers. Transportation arrangements may be made in advance by communicating with C. G. Marshall, box 308, La Jolla. Telephone, La Jolla 8702–R–3.

Biophysical Laboratory.—Hybridization and genetic studies with maize and maize relatives. Work directed from Washington, D. C.; local supervision by C. G. Marshall, assistant agronomist and superintendent, in charge.

Cotton, Rubber, and Other Tropical Plants.—Acclimatization investigations with cotton, rubber, and other tropical crop plants. C. G. Marshall, assistant agronomist and superintendent, in charge.

Drug and Related Plants.—Experimental culture of plants yielding volatile oils used in the perfume industry. Work directed from Washington, D. C.; local supervision by C. G. Marshall, assistant agronomist and superintendent.

Horticultural Crops and Diseases.—A receiving station, including greenhouse and special propagating facilities, for the handling of citrus plants to permit their growth and reinspection by local authorities before using them in field tests. Work directed by W. T. Swingle, principal physiologist.

San Francisco

United States Crop Physiology Field Office.—1813 Pierce Street. Telephone.

Horticultural Crops and Diseases.—Smyrna fig and pistache investigations and distributions. Experiments directed by W. T. Swingle, principal physiologist; local supervision by G. P. Rixford, associate physiologist.

United States Forest Pathology Field Office.—Located at Forest Service headquarters, Ferry Building.

Forest Pathology.—Investigation of forest and ornamental tree diseases; direction of forest-pathology activities for National Forest Districts 4 and 5 in cooperation with the Forest Service. W. W. Wagener, pathologist, in charge.

Santa Paula

Limoneira Laboratory.—Four and one-half miles west of Santa Paula, which is on the Southern Pacific Railroad. Transportation arrangements may be made by communicating with L. V. Wilcox. Telephone, 714–X–1.

Western Irrigation Agriculture.—Field investigations in irrigation agriculture with special reference to the boron content of irrigation waters and in the soil solution; methods of irrigation, isolation of sources of contamination of the water supply, and other correctives designed to prevent injury to orchard crops by boron in the irrigation water; the testing of orchard crops for resistance to boron injury, and the collecting and publishing of results of investigations. L. V. Wilcox, associate agronomist, in charge.

Santa Rosa

Cooperative grape experiments, including studies of varietal adaptability and of the adaptability of resistant stocks to different soils and congeniality with different varieties, conducted by *Office of Horticultural Crops and Diseases.* On property of Oliver Fowler, Rincon Valley, about 3½ miles from Santa Rosa, which is reached either by the Northwestern Pacific or Southern Pacific Railroads. Work directed from Washington, D. C.; local supervision by F. L. Husmann, superintendent, Napa.

Shafter

United States Cotton Field Station.—Two miles north of Shafter (Kern County) railroad station, main line of the Atchison, Topeka & Santa Fe. Transportation arrangements may be made in advance by communicating with F. W. Herbert. Telephone, Shafter 16.

Cotton, Rubber, and Other Tropical Plants.—Acclimatization and adaptation investigations, with special reference to the breeding and cultural improvement of cotton. F. W. Herbert, senior scientific aid, acting in charge.

Forage Crops and Diseases.—Agronomic investigations with alfalfa and sorghum. Local supervision by F. W. Herbert, senior scientific aid.

Horticultural Crops and Diseases.—Nursery-stock investigations, including propagation of fruit trees by root cuttings and selected seedlings; experiments in propagation of rose stocks. L. B. Scott, senior pomologist, in charge.

Grape investigations, principally a study of resistant stocks. Work directed from Washington, D. C.; local supervision by Elmer Snyder, 3930 Kerckhoff Avenue, Fresno.

CANAL ZONE

Ancon

Experimental rubber plantings of Office of Cotton, Rubber, and Other Tropical Plants.—F. C. Baker, senior technologist, in charge. Address, P. O. Box A–39, Port au Prince, Haiti. Local supervision by James Zetek, associate entomologist. Mr. Zetek's office is in the United States Entomological Laboratory, which is on the Ancon Hill, on the road leading to the Ancon Hospital.

Experimental rubber plantings of Office of Cotton, Rubber, and Other Tropical Plants, located on Fort Sherman Military Reservation. F. C. Baker, senior technologist, in charge. Address, P. O. Box A–39, Port au Prince, Haiti.

Summit

Experimental rubber plantings of Office of Cotton, Rubber, and Other Tropical Plants, in cooperation with Canal Zone Plant Introduction Gardens. F. C. Baker, senior technologist, in charge. Address, P. O. Box A–39, Port au Prince, Haiti. Local supervision by J. E. Higgins, agronomist with Panama Canal Service, Summit, Canal Zone.

Propagation and cultural experiments with abacá (Manila hemp), conducted by *Office of Fiber Plants*. Work directed from Washington, D. C.; local supervision by J. E. Higgins, agronomist with Panama Canal Service, Summit, Canal Zone.

COLORADO

Akron

United States Dry-Land Field Station.—About 4 miles east of Akron (Chicago, Burlington & Quincy Railroad), on Golden Belt Highway. May be reached by auto, or transportation arrangements may be made by communicating with J. F. Brandon. Telephone, 86–R–2.

Dry-Land Agriculture.—Dry-land crop rotations and production, forestry investigations, and use of sheep with pasture rotations, all in cooperation with Colorado Agricultural Experiment Station. J. F. Brandon, associate agronomist and superintendent, in charge.

Horticultural Crops and Diseases.—Fruit-production investigations. Work directed from

Washington, D. C.; local supervision by J. F. Brandon, associate agronomist and superintendent.

Fort Collins

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Botany Building, State College of Agriculture, about 1 mile from railroad stations at Fort Collins, which is reached by the Colorado & Southern or Union Pacific Railroad. Take street car to college. (Work conducted in cooperation with State College of Agriculture.)

State College of Agriculture (cooperative investigations).—About 1 mile from railroad stations at Fort Collins, which is reached by the Colorado & Southern or Union Pacific Railroads. Take street car to college.

Drug and Related Plants.—Field tests with safflower as an oilseed crop for the production of drying oils. Work directed from Washington, D. C.; local supervision by Alvin Kezer, professor of agronomy.

United States Sugar Plant Field Experiments.—Office in Botany Building, Colorado State College of Agriculture; field operations at Larimer County Hospital grounds, on East Elizabeth Street (1 mile east of college).

Sugar Plants.—Investigations of methods of sugar-beet breeding for beet improvement and for disease resistance. Dewey Stewart, associate pathologist, in charge.

Greeley

Colorado Potato Experiment Station.—About 3½ miles northeast of railroad station at Greeley, which is on the Colorado & Southern and Union Pacific Railroads. Transportation arrangements may be made by communicating with W. C. Edmundson. Telephone, 636.

Horticultural Crops and Diseases.—Potato investigations. W. C. Edmundson, horticulturist and superintendent, in charge.

Potato-disease investigations. H. G. MacMillan, senior pathologist, in charge. Residence, 1211 Eighth Street. Telephone, Greeley 56S–W. (Laboratory at 1211 Eighth Street.)

Mancos

Montezuma National Forest (cooperative investigations).—In southwestern Colorado near Mancos, which is on the Rio Grande Southern Railway. Arrangements for transportation to experimental areas may be made by communicating with the forest supervisor, Mancos, Colo.

Forage Crops and Diseases.—Experiments in cooperation with the Forest Service in establishing sweetclover on depleted range lands, including tests of sweetclover strains. Work directed from Washington, D. C.; local supervision by Forest Service officer at Mancos.

Rocky Ford

United States Sugar Plant Field Laboratory.—Two blocks from Atchison, Topeka, & Santa Fe Railway station. Office in Chamber of Commerce Building.

Sugar Plants.—Investigations in methods of sugar-beet culture and of disease control; testing strains for disease resistance. F. G. Larmer, assistant pathologist, in charge during growing season.

CONNECTICUT

New Haven

State Agricultural Experiment Station.—123 Huntington Street. May be reached from railroad station by Whitney Avenue cars: get off at Huntington Street and walk up hill 1½ blocks. Telephone, Liberty 1253.

Blister Rust Control.—Cooperative control of white-pine blister rust. J. E. Riley, jr., assistant pathologist and State leader, in charge. May be reached at office of station forester.

United States Forest Pathology Field Office.—Room 257, Osborn Botanical Laboratory, Yale University. Take street car from railroad station to Yale University.

Forest Pathology.—Investigations of tree surgery, in cooperation with Yale University. R. P. Marshall, associate pathologist, in charge.

Windsor

Tobacco Substation, State Agricultural Experiment Station (cooperative investigations).—One mile west of Windsor (on New York, New Haven & Hartford Railroad); may be reached by going west on Bloomfield Avenue to top of Cook Hill, then taking left fork. Station is first farm on right.

Tobacco and Plant Nutrition.—Investigations of root diseases and fertilizer requirements of tobacco. C. V. Kightlinger, agent, in charge. Headquarters in the microbiology department of the Massachusetts Agricultural College, Amherst, Mass. Telephone, Amherst 126. P. J. Anderson, in charge of the tobacco substation, may be reached by calling Windsor 312–5.

FLORIDA

Bradenton

United States Truck Crop Disease Field Laboratory.—Six miles north and west of Bradenton (Atlantic Coast Line and Seaboard Air Line Railroads). May be reached by auto, taking Bayshore Road for 5 miles, turning right three-fourths mile beyond country club. Bus service also from Tampa. Telephone, 26480.

Horticultural Crops and Diseases.—Mosaic diseases of vegetable crops. S. P. Doolittle, senior pathologist, in charge. (Activities centered here from January to May; balance of year at Madison, Wis.)

Canal Point

United States Sugar Plant Field Station.—May be reached by taking bus at foot of Clematis Avenue (opposite Palms Hotel), West Palm Beach, at 7.45 a. m., to Canal Point; walk one-half mile north.

Sugar Plants.—Investigations of sugarcane diseases and seedling studies with reference to immune varieties. G. B. Sartoris, pathologist, in charge.

Coconut Grove

United States Plant Introduction Garden.—At Chapman Field, 6 miles south of Coconut Grove, which is on the Florida East Coast Railway, and approximately 15 miles from Florida East Coast Railway station at Miami. May be reached by auto. Telephone, long distance, Chapman Field, Station 1.

Cotton, Rubber, and Other Tropical Plants.—Investigations with rubber-producing plants. Alfred Keys, associate horticulturist, acting in charge.

Foreign Plant Introduction.—Propagation and testing of new plant introductions. Edward Simmonds, principal scientific aid and acting superintendent, in charge.

Eustis

United States Citrus Field Experiments.—At end of Center Street, outskirts of Eustis, which is on the Atlantic Coast Line Railroad. No telephone.

Horticultural Crops and Diseases.—Hybridization of citrus fruits; testing of citrus hybrids;

breeding new types of citrus plants to meet special conditions. Work directed by W. T. Swingle, principal physiologist; local supervision by E. M. Savage, assistant plant breeder.

Gainesville

State Agricultural Experiment Station (cooperative investigations).—About one-half mile from railroad stations at Gainesville, which is on the Atlantic Coast Line and Seaboard Air Line Railroads.

Forage Crops and Diseases.—Investigations of grasses and legumes adapted to the Southeastern States, including methods of pasture management and fertilization; golf and lawn turf production and maintenance; and the value of cover and green-manure crops. G. E. Ritchey, agent, in charge.

Citrus Canker Eradication Field Office.—On University of Florida campus.

Direction of local activities in the eradication of citrus canker in Florida. Wilmon Newell, commissioner, State Plant Board, in charge.

Lake Alfred

Citrus Experiment Station, State Agricultural Experiment Station (cooperative investigations).—Three miles southwest of Lake Alfred (Atlantic Coast Line Railroad). May be reached by auto.

Horticultural Crops and Diseases.—Investigations in citrus and subtropical fruit production and bud selection. Work directed from Washington, D. C.; local supervision by J. H. Jeffries. superintendent.

Orlando

United States Citrus Disease Field Laboratory.—Northwest corner of fair grounds, near West Amelia and Parramore Streets, 2½

miles from Atlantic Coast Line Railroad station; 1 mile from hotels and post office. Telephone, 3804.

Horticultural Crops and Diseases.—Investigations of citrus and subtropical fruit diseases. H. E. Stevens, senior pathologist, in charge.

Redland

United States Truck Crop Disease Field Laboratory.—May be reached by automobile from Homestead, nearest passenger stop to Redland (a distance of 5 or 6 miles), on the Florida East Coast Railway. Go 1 mile west from station on Mowery Street, turn north on Redland Road, and travel approximately 4½ miles. Laboratory on left, a short distance from Coconut Palm Drive. No telephone.

Horticultural Crops and Diseases.—Tomato disease and breeding investigations, particularly for resistance to nailhead rust. F. J. Pritchard, senior physiologist, in charge. (Activities centered here about six months of year; other six months at Washington, D. C.)

GEORGIA

Albany

United States Horticultural Field Office.—Room 205, Federal Building. Telephone, 327.

Horticultural Crops and Diseases.—Nut-culture investigations; studies on pecan-orchard management, crop-production problems, and varietal adaptability. H. L. Crane, horticulturist, in charge. (Field investigations conducted at Philema.)

Athens

State College of Agriculture (cooperative investigations.—College located about 10-minute ride by street car from center of town.

Cereal Crops and Diseases.—Investigations of fall-sown cereals, including studies of varieties, breeding, dates and rates of seeding, tillage, rotations, and fertilizers. R. R. Childs, agent, in charge. Located in agronomy department. Telephone, 467.

Cairo

United States Sugar Plant Field Laboratory.—Two and one-half miles north of Cairo, which is on the Atlantic Coast Line Railroad. May be reached by driving north on Broad Street to fork in road, then taking left road 2 miles to corrugated-iron sirup mill on left. Office in courthouse.

Sugar Plants.—Studies of sugarcane varieties for sirup production, methods of making sirup on the farm, and use of by-products. B. A. Belcher, assistant agronomist, in charge.

Fort Valley

United States Peach Disease Field Laboratory.—On grounds of Hale-Georgia Farms Co. (Inc.), the entrance to which is about 2 miles east on the Miami Valley Road from the Union Station at Fort Valley (Central of Georgia Railway). Laboratory is about one-half mile north on the plantation avenue from Miami Valley Road. Telephone, Fort Valley 148–W.

Horticultural Crops and Diseases.—Investigations of diseases of peaches. L. M. Hutchins, pathologist, in charge.

Phony Peach Eradication.—Headquarters for campaign for eradication of phony peach disease in Georgia. W. F. Turner, agent, in charge.

Philema

United States Pecan Field Station.—Located near railroad station at Philema, which is 15 miles northeast of Albany, on the Georgia Southwestern & Gulf Railroad.

Horticultural Crops and Diseases.—Nut-culture investigations. H. L. Crane, horticulturist, in charge. Office in room 205, Federal Building, Albany. Telephone, 327.

Savannah

Barbour Lathrop Plant Introduction Garden.—Twelve miles southwest of courthouse on Coastal Highway (or Ogeechee Road). May be reached from Savannah by motor bus going to Brunswick and Jacksonville. Telephone, long distance, Bamboo Garden.

Foreign Plant Introduction.—Bamboo investigations and testing of new plant introductions. D. A. Bisset, chief scientific aid, acting in charge.

Thomasville

United States Pecan Disease Field Laboratory.—Room 218, Post Office Building; about five blocks from railroad station at Thomasville, which is reached on the Atlanta, Birmingham & Atlantic or Atlantic Coast Line Railroad. Telephone, 748.

Horticultural Crops and Diseases.—Investigations of pecan and other nut diseases. J. B. Demaree, pathologist, in charge.

Tifton

Georgia Coastal Plain Experiment Station (cooperative investigations).—Northwest of Tifton, which is on the Atlanta, Birmingham & Atlantic and Atlantic Coast Line Railroads. Take State Highway No. 7 for 1½ miles, then turn to road on left. Telephone, 9.

Cereal Crops and Diseases.—Corn investigations, with special reference to breeding for yield and resistance to damage by insects and

diseases. Work directed from Washington, D. C.; local supervision by W. J. Davis, agronomist of the station.

Forage Crops and Diseases.—Investigations of grasses and legumes adapted to the Southeastern States, including methods of pasture management and fertilization; and the value of cover and green-manure crops. J. L. Stephens, agent, in charge.

Tobacco and Plant Nutrition.—Crop rotation studies; tobacco fertilizer and varietal tests; effect of length of day on plants. J. M. Carr, agent, in charge.

Tobacco disease investigations. J. G. Gaines, agent, in charge.

HAITI

Bayeux

Tapping experiments with mature trees of Hevea, Castilla, and other rubber trees, conducted by *Office of Cotton, Rubber, and Other Tropical Plants.* Communications regarding the rubber-plant investigations in Haiti should be addressed to F. C. Baker, senior technologist, P. O. Box A–39, Port au Prince, Haiti. Transportation arrangements may be made in advance by writing Mr. Baker.

Port au Prince

Thor Experiment Station.—Near Port au Prince from which point work is conducted at Bayeux and also incidental work at Ennery, St. Michel, and Gonaives, Haiti.

Cotton, Rubber, and Other Tropical Plants.—Plantings of Hevea and other rubber-producing plants, including tests of dry-season conditions, with and without irrigation. F. C. Baker, senior technologist, in charge. Address, P. O. Box A–39, Port au Prince, Haiti.

IDAHO

Aberdeen

Aberdeen Substation, State Agricultural Experiment Station (cooperative investigations.—Three-fourths mile from Union Pacific System station. May be reached by conveyance or on foot; transportation arrangements may be made by telephoning substation.

Cereal Crops and Diseases.—Agronomic experiments and genetic, physiological, and chemical studies with cereals under irrigation, particularly with barley, oats, and spring wheat. L. L. Davis, junior agronomist, in charge. Telephone, Y–11.

Forage Crops and Diseases.—Seed production studies with clovers. Work directed from Washington D. C.; local supervision by A. E. McClymonds, superintendent.

Moscow

State Agricultural Experiment Station and College of Agriculture (cooperative investigations).—About one-half mile from railroad station at Moscow, which is on the lines of the Great Northern and Northern Pacific Railways, and the Union Pacific System. May be reached by auto or on foot; transportation arrangements may be made by telephoning station.

Blister Rust Control.—Cooperative control of white-pine blister rust. E. E. Hubert, collaborator, in charge. May be reached at School of Forestry.

Cereal Crops and Diseases.—Laboratory, field, and greenhouse studies on stripe rust of cereals and grasses. W. M. Bever, junior pathologist, in charge. Telephone, 187–R.

Twin Falls

United States Sugar Plant Field Laboratory.—In new Entomology Building, 1 mile north of post office on Blue Lake Boulevard. Transportation arrangements may be made by telephoning 1082. Twin Falls is on the Union Pacific System, but may also be reached by motor bus from Minidoka, Pocatello, and Jerome.

Horticultural Crops and Diseases.—Investigations of curly-top disease of vegetables. W. W. Tracy, associate agronomist, in charge.

Sugar Plants.—Ecological investigations, curly-top occurrence on weed host plants. R. L. Piemeisel, physiologist, in charge.

Plant-disease investigations, curly-top disease investigations, and disease-resistance studies. J. M. Wallace, associate pathologist, in charge.

Agronomic investigations, investigations in agronomic problems connected with sugar-beet production in relation to curly-top. C. E. Cormany, associate agronomist, in charge.

ILLINOIS

Bloomington

United States Cereal Pathology Field Experiments (cooperation with Funk Bros. Seed Co. and State Agricultural Experiment Station).—Office about one-fourth mile west of the Chicago & Alton Railroad station, or three-fourths mile west of the Cleveland, Cincinnati, Chicago & St. Louis (Big Four) station. May be reached by street car; transportation arrangements may be made in advance by communicating with J. R. Holbert. Experiment fields 10 miles from town. Telephone, 173.

Cereal Crops and Diseases.—Investigations of root, stalk, and ear rots of corn, including studies of infection, soil infestation, and control

methods, principally by physical selection of seed ears in the field and on the germinator, by breeding, by seed treatments, and by soil treatments. J. R. Holbert, senior agronomist, in charge.

Chicago

Markets Pathology Field Laboratory.—Office, 1425 South Racine Avenue. Take Blue Island street car going west at Clark and Adams Streets, get off at Racine Avenue, and walk one-half block south. Telephone, Roosevelt 4690. Laboratory located in department of botany, University of Chicago. Take car marked "Cottage Grove" going south. (Cars marked "No. 1" turn at Fifty-fifth Street; others give transfers to Fifty-fifth Street.) Get off at University Avenue and walk two blocks south. Telephone, Midway 0800, local 208–2.

Horticultural Crops and Diseases.—Investigations of plant diseases causing spoilage of vegetables; instruction of food-products inspectors in identification of diseases of vegetables found in storage, market, and transit, and the interpretation of their significance as causes of spoilage in vegetable products. G. B. Ramsey, senior pathologist, in charge.

Urbana

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Post Office Building, about four blocks from Cleveland, Cincinnati, Chicago & St. Louis (Big Four) railroad station. (Work conducted in cooperation with Extension Service, State College of Agriculture.)

State Agricultural Experiment Station (cooperative investigations).—About 1½ miles from railroad station at Urbana, which is on the

Cleveland, Cincinnati, Chicago & St. Louis (Big Four) Railroad. May be reached by bus or street car from railroad station at either Urbana or Champaign.

Cereal Crops and Diseases.—Effect of various crop rotations and fertilizer treatments on the development of root, stalk, and ear rots of corn grown from treated or untreated seed of different qualities and strains. Supervision by J. R. Holbert from Bloomington; local supervision by W. L. Burlison and Benjamin Koehler.

Forage Crops and Diseases.—Strains and variety trials of red clover and soybeans, including source of seed tests of clovers. Work directed from Washington, D. C.; local supervision by W. L. Burlison, agronomist and chief in crop production.

INDIANA

La Fayette

Agricultural Experiment Station and College of Agriculture, Purdue University (cooperative investigations).—At West La Fayette, about 1½ miles from La Fayette. May be reached by street car from La Fayette.

Cereal Crops and Diseases.—Pathologic, physiologic, chemical, and genetic studies of root, stalk, and ear rots of field and sweet corn, especially relating to accumulations of iron and aluminum, and remedial soil treatments. J. F. Trost, associate pathologist, acting in charge. Telephone, 2329.

Research on leaf rusts of wheat, rye, barley, and corn, including determinations of alternate hosts, physiologic forms, and host resistance and breeding for rust resistance. E. B. Mains, agent and pathologist, in charge. Telephone, 2187.

Drug and Related Plants.—Field tests with safflower as an oilseed crop for the production

of drying oils. Work directed from Washington, D. C.; local supervision by A. A. Hansen, botanist of the experiment station.

Forage Crops and Diseases.—Study of clover diseases, especially clover mildew. Work directed from Washington, D. C.; local supervision by E. B. Mains, of the experiment station.

Horticultural Crops and Diseases.—Studies in connection with vegetable variety type book-work on tomatoes. H. D. Brown, collaborator, in charge.

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office at College of Agriculture, West La Fayette, about 1½ miles from La Fayette; may be reached by street car from La Fayette. (Work conducted in cooperation with Agricultural Experiment Station and College of Agriculture, Purdue University.)

Cooperative Seed-Testing Laboratory.—At Agricultural Experiment Station, Purdue University. Telephone.

Seed Laboratory.—Testing agricultural seeds for mechanical purity and germination; identification of seeds of cultivated plants and weeds; testing seeds submitted in connection with enforcement of Federal seed act. H. R. Kraybill, collaborator, in charge; Regina B. Schulte, assistant botanist.

South Bend

Truck-crop experiments, particularly adaptation of truck crops to muck soils, conducted by *Office of Horticultural Crops and Diseases.* Experiments located on property of W. C. Steenburg, route 1, box 72–C, South Bend. Experimental plots may be reached by auto. or by New York Central Railroad from South Bend to Steenburg. (Poor train service.)

Work directed from Washington, D. C.; la supervision by Mr. Steenburg. Telephone, County 17–F–3.

Vincennes

United States Fruit Disease Field Laboratory.—2 East Locust Street, seven blocks from Union Station at Vincennes, which may be reached by the Baltimore & Ohio, Cleveland, Cincinnati, Chicago & St. Louis (Big Four), or Pennsylvania Railroads. Take street car from station. Telephone, 1712.

Horticultural Crops and Diseases.—Peach and apple disease-control experiments. Leslie Pierce, principal scientific aid, in charge.

IOWA

Ames

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Old Agricultural Hall, State College of Agriculture, about 1 mile west of railroad station; may be reached by bus, interurban railway, or street car. (Work conducted in cooperation with State Agricultural Experiment Station and College of Agriculture.)

State Agricultural Experiment Station and College of Agriculture (cooperative investigations).—About 1 mile west of railroad station; may be reached by bus, interurban railway, or street car.

Cereal Crops and Diseases.—Breeding spring oat varieties by pure-line selection. L. C. Burnett, agent and chief in cereal breeding, in charge. Experiments carried on at agronomy farm, about 2 miles southwest of town. Mr. Burnett lives in Ames; may be reached at Old Agricultural Hall. Telephone, 985–J.

Extensive corn-breeding experiments and varietal comparisons. M. T. Jenkins, associate

agronomist, and A. A. Bryan, assistant agronomist, in charge. Located in Hall of Agriculture.

Studies in crown rust of oats in the laboratory, greenhouse, and field. H. C. Murphy, assistant pathologist, in charge. May be reached at old Agricultural Hall. Telephone, 260–W.

Forage Crops and Diseases.—Investigations of regional strains of red clover and alfalfa. F. S. Wilkins, agent, in charge.

Horticultural Crops and Diseases.—Potato breeding and seed improvement work. A. T. Erwin, collaborator, in charge.

KANSAS

Colby

Colby Branch Station, State Agricultural Experiment Station (cooperative investigations).—One mile west of Colby on main road. Colby is on the Chicago, Rock Island & Pacific Railway and Union Pacific System. Transportation arrangements may be made by telephoning E. H. Coles. Telephone, 131.

Cereal Crops and Diseases.—Corn breeding and varietal testing. Under supervision of A. M. Brunson, agronomist, Manhattan; local direction by E. H. Coles, associate agronomist and superintendent.

Dry-Land Agriculture.—Dry-land crop rotations and production. J. B. Kuska, associate agronomist, in charge.

Garden City

Garden City Branch Station, State Agricultural Experiment Station (cooperative investigations).—About 4 miles northeast of Garden City, which is on the Atchison, Topeka & Santa Fe Railway. Transportation arrangements may be made by telephoning F. A. Wagner, the superintendent, calling 32–F–3.

Dry-Land Agriculture.—Dry-land crop rotation and production. R. L. Von Trebra, agent, in charge. Telephone, 32–F–11.

Hays

Fort Hays Branch Station, State Agricultural Experiment Station (cooperative investigations).—About one-half mile south of Hays, which is on the Union Pacific System. May be reached by auto, or transportation arrangements may be made by telephoning L. C. Aicher, the superintendent, calling 123.

Cereal Crops and Diseases.—Agronomic investigations of wheat, oats, barley, corn, and grain sorghums, including varietal comparisons; experiments on rates, dates, and methods of seeding; seed-bed preparations and rotation studies; special tillage experiments for the prevention of winterkilling. A. F. Swanson, associate agronomist, in charge.

Dry-Land Agriculture.—Dry-land crop rotations and production; use of commercial fertilizers and soil-nitrate studies. A. L. Hallsted, associate agronomist, in charge. Telephone, 40–F–30.

Forage Crops and Diseases.—Agronomic investigations of miscellaneous forage crops suitable for dry-land conditions, principally sorghums, alfalfa, grasses, and sweetclover. D. A. Savage, assistant agronomist, in charge.

Manhattan

State Agricultural Experiment Station (cooperative investigations).—About 2 miles northwest of railroad station. Campus may be reached by street car or auto.

Cereal Crops and Diseases.—Agronomic investigations of wheat and oats, especially breeding and genetic studies, including experiments in breeding wheat for winter hardiness, early maturity, stiffness of straw, and yield; breeding

oats for disease resistance and yield. J. H. Parker, agronomist and professor of agronomy, in charge. Located in Agronomy Building. Telephone, 2394.

Agronomic investigations of corn, with special emphasis on breeding and genetic studies. A. M. Brunson, agronomist, in charge. Located in Agronomy Building. Telephone, 2394.

Research on leaf rust of wheat, including special studies with the different physiologic forms, the relative susceptibility of the various wheat varieties to each of these forms, and the inheritance of resistance in wheat to leaf rust. C. O. Johnston, assistant pathologist, in charge. Located in botany department. Telephone, 37349.

Research on foot rots of cereals, including extensive greenhouse and field experiments to determine the host range and the relative susceptibility of wheat varieties. Hurley Fellows, associate pathologist, in charge. Located in botany department. Telephone, 37349.

Forage Crops and Diseases.—Variety and strain tests of alfalfa, including a study of the causes of alfalfa failure and selection and breeding of wilt-resistant strains. C. O. Grandfield, agent, in charge.

KENTUCKY

Lexington

State Agricultural Experiment Station (cooperative investigations).—Located on the edge of the city, and may be reached by street car or automobile.

Forage Crops and Diseases.—Experiments to determine the best red-clover types for the southern part of the clover area; selection of adapted strains, and a study of the best means of propagating such strains and encouraging their general use. Work directed from Washington, D. C.; local supervision by E. N. Fergus, associate professor of farm crops.

LOUISIANA

Baton Rouge

State Agricultural Experiment Station (cooperative investigations).—Two and one-half miles south of Baton Rouge; may be reached by bus.

Cereal Crops and Diseases.—Agronomic experiments with corn, including varietal comparisons, breeding experiments, and experiments on the relation of husk characters to damage by weevils and corn earworms. H. F. Stoneberg, assistant agronomist, in charge. Telephone, 3452.

Citrus Canker Eradication Field Office.—State Department of Agriculture.

Direction of local activities in the eradication of citrus canker in Louisiana. W. E. Anderson, State entomologist, in charge.

Crowley

Rice Experiment Station, State Agricultural Experiment Station (cooperative investigations).—One mile west of Crowley (Southern Pacific Railroad) on a good road. Transportation arrangements may be made by telephoning the station superintendent, calling 196.

Cereal Crops and Diseases.—Introduction and comparison of rice varieties from foreign countries; botanical and hybridization studies; cultural, fertilizer, irrigation, and rotation experiments. J. M. Jenkins, associate agronomist, in charge.

Houma

United States Sugar Plant Field Station.—On Southdown plantation, at end of Lafayette Street. Houma is on the Southern Pacific Railroad, but the best way to reach the station is to take bus at Canal and Rampart Streets, New Orleans.

Sugar Plants.—Investigations of sugarcane diseases and varietal and agronomic problems. George Arceneaux, agent, in charge.

Jeanerette

Iberia Livestock Experiment Station (cooperative investigations).—Four miles west of Jeanerette (Missouri Pacific and Southern Pacific Railroads), on the main highway from Jeanerette to New Iberia. May be reached by bus from either place.

Forage Crops and Diseases.—Introduction and testing of forage crops; pasture investigations, including grazing experiments and yield studies on small plots; soybean variety tests and breeding. Work directed from Washington, D. C.; local supervision by W. R. Dodson, superintendent. Cooperation with Bureaus of Animal Industry and Dairy Industry.

New Orleans

United States Forest Pathology Field Office.—Located at Southern Forest Experiment Station, 600 Stern Building, 348 Baronne Street.

Forest Pathology.—Investigation of forest-tree diseases, in cooperation with the United States Forest Service. P. V. Siggers, associate pathologist, in charge.

Shreveport

United States Pecan Field Station.—Office in courthouse at Shreveport, which is on the main line of the Texas & Pacific Railway. Station is located 14 miles southeast of the courthouse and 9 miles from the city limits, on the west side of the Louisiana Purchase Highway (Harts Island Road), a quarter of a mile south of the Robson post office.

Horticultural Crops and Diseases.—Nut-culture investigations. J. R. Cole, associate pathologist, in charge.

MAINE

Augusta

State Forest Service.—In statehouse; may be reached by street car. Telephone, 1200. Augusta is on the Maine Central Railroad.

Blister Rust Control.—Cooperative control of white-pine blister rust. W. O. Frost, associate pathologist and State leader, in charge. May be reached at the office of the forest commissioner.

Presque Isle

Aroostook Farm, State Agricultural Experiment Station (cooperative investigations).—One and three-fourths miles south of railroad station at Presque Isle, which is on the Bangor & Aroostook Railroad and Canadian Pacific lines in Maine. Transportation arrangements may be made by telephoning P. M. Lombard at Aroostook farm (154–12). Government office closed from October 15 to March 31.

Horticultural Crops and Diseases.—Potato investigations. P. M. Lombard, associate horticulturist, in charge.

United States Potato Disease Laboratory.—South of Normal School; about one-half mile from Presque Isle House. Occupied only during summer growing season. Mr. Schultz may be reached by telephoning the laboratory (154–4) or the Aroostook farm (154–2).

Horticultural Crops and Diseases.—Investigations of potato diseases and experiments with control measures. E. S. Schultz, senior pathologist, in charge.

MARYLAND

Beltsville

Animal Husbandry Experiment Farm.—Two miles from Beltsville. May be reached by suburban trolley or by bus from the Department of Agriculture at Washington.

Forage Crops and Diseases.—Pasture investigations, including grazing tests with beef cattle in a comparison of methods of pasture management; yield and palatability studies of various pasture plants in pure stands; chemical studies of pasture plants; and experiments with fertilizers on pastures, including their use in the renovation of an old pasture. M. A. Hein, assistant agronomist, in charge. Cooperation with Bureau of Animal Industry.

Dairy Experiment Farm.—One and one-half miles from Beltsville. May be reached by suburban trolley or by bus from the Department of Agriculture at Washington.

Forage Crops and Diseases.—Pasture investigations, including a comparison of the Hohenheim or German system of rotation grazing with the ordinary method of continuous grazing. M. A. Hein, assistant agronomist, in charge. Cooperation with Bureau of Dairy Industry.

Bethesda

United States Citrus Detention Station.—May be reached by street car or auto from Washington; or transportation arrangements may be made by communicating with Eugene May, Greenhouse No. 3, Fourteenth and B Streets NW., Washington. Telephone, National 4645, branch 458.

Horticultural Crops and Diseases.—Experimental propagation of citrus plants under aseptic methods. Work directed from Washington, D. C.

College Park

State Agricultural Experiment Station (cooperative investigations).—Eight miles northeast of Washington, on the Washington-Baltimore Boulevard; also reached by street car from Washington.

Horticultural Crops and Diseases.—Vegetable crop-production investigations. Experimental

plots located 3 miles from College Park, near Beltsville, Md. T. H. White, collaborator, in charge.

Pear-breeding investigations. A. L. Schrader, collaborator, in charge.

Glenn Dale

United States Plant Field Station.—Sixteen miles from Washington, D. C., on Washington, Baltimore & Annapolis Electric Railroad. In going by the electric car, get off at Bell station. May also be reached by Pennsylvania Railroad to Glenn Dale, then by auto or on foot 1¼ miles south; or by auto from Washington via Washington-Baltimore Boulevard to Bladensburg, Md., turning right on the Defense Highway and continuing about 8 miles, taking the first turn to the left after crossing the second bridge on the Defense Highway (over W. B. & A. R. R.), and continuing one-half mile north to the plant field station. Arrangements for transportation from Glenn Dale may be made by telephoning the superintendent. Telephone, Bowie 35–F–4.

Cereal Crops and Diseases.—Assembling, growing, and classifying native and introduced species, varieties, and hybrids of barberry (Berberis). Identified material is transferred to the Minnesota Agricultural Experiment Station for cooperative testing of rust susceptibility. B. Y. Morrison, senior horticulturist, in charge.

Foreign Plant Introduction.—Propagation, testing, and detention of new plant introductions. H. A. Gunning, associate horticulturist and superintendent, in charge.

Forest Pathology.—Chestnut-breeding and chestnut-blight investigations. G. F. Gravatt, senior pathologist, in charge.

Horticultural Crops and Diseases.—Fruit-production investigations, including breeding and culture of small fruits. J. R. Magness, principal pomologist, in charge.

Fruit-tree, rose-stock, and nut-culture investigations. J. R. Magness, principal pomologist, in charge.

Lanham

Maize-heredity studies, conducted by *Biophysical Laboratory*. Experiments located about 1 mile east of Pennsylvania Railroad station at Lanham, which is about 8 miles from Washington on the Defense Highway. Work directed from Washington, D. C.; J. H. Kempton, botanist, in charge.

Upper Marlboro

Branch Station, State Agricultural Experiment Station (cooperative investigations).—One-fourth mile from center of town, on county fair grounds. Mr. Brown is at the station from March to October. No telephone.

Tobacco and Plant Nutrition.—Crop-rotation studies; tobacco fertilizer and varietal tests; technical studies in nutrition of the tobacco plant. D. E. Brown, principal scientific aid, in charge.

MASSACHUSETTS

Amherst

State Agricultural Experiment Station (cooperative investigations).—About 1 mile north of center of Amherst. Take car marked "North Amherst" at Amherst, and get off at the experiment station. Telephone, 126.

Forage Crops and Diseases.—Source of seed tests of alfalfa and red clover; tests of varieties and strains of soybeans for hay and seed under

New England conditions. Work directed from Washington, D. C.; local supervision by A. B. Beaumont, agronomist of the experiment station.

Tobacco and Plant Nutrition.—Laboratory investigations on diseases of tobacco. C. V. Kightlinger, agent, in charge.

Northeastern Forest Experiment Station (cooperative investigations).—On campus of Massachusetts Agricultural College, about 1 mile from the Boston & Maine Railroad station. May be reached by street car.

Forest Pathology.—Investigations of forest-tree diseases in cooperation with Northeastern Forest Experiment Station. Perley Spaulding, senior pathologist, in charge.

Boston

Blister Rust Control Field Office.—Room 403, Appraisers' Stores Building, 408 Atlantic Avenue. About five minutes walk northeast on Atlantic Avenue from South Station; or may be reached by elevated trains marked "North or South Station via Atlantic Avenue," getting off at Rowe's Wharf station, and walking one block southwest. Telephone, Hancock 5230.

Blister Rust Control.—Field direction of cooperative blister rust control activities in the Northeastern and Lake States. E. C. Filler, senior pathologist, in charge. Mr. Filler's residence and telephone are listed in the directory.

State Department of Agriculture.—Room 136, statehouse, telephone, Haymarket 4600 (Agriculture).

Blister Rust Control.—Cooperative control of white-pine blister rust. C. C. Perry, agent and State leader, in charge. May be reached at office of commissioner of agriculture.

East Wareham

Cranberry Substation, State Agricultural Experiment Station (cooperative investigations).—Mail address, East Wareham; railroad station, Onset, on New York, New Haven & Hartford Railroad, 51 miles southeast of Boston. From New York City most conveniently reached by Fall River boat and New York, New Haven & Hartford Railroad. Laboratory and bog located about 1 mile from railroad station or post office; go one-half mile north on main road to Agawam garage, where sign directs to "State Bog." Telephone, Wareham 112–3.

Botany.—Cooperative testing of blueberry hybrids. H. J. Franklin, of the Massachusetts Agricultural Experiment Station, in charge.

Horticultural Crops and Diseases.—Investigations of cranberry diseases, especially false blossom and fruit rots; also investigations of diseases of strawberries and blueberries. N. E. Stevens, senior pathologist, in charge. (Work conducted during summer months only.)

MICHIGAN

Augusta

W. K. Kellogg Demonstration and Experimental Farm, State Agricultural Experiment Station (cooperative investigations).—Substation is about 8 miles northwest of Augusta, which is about 10 miles from Battle Creek on the Michigan Central Railroad. Visitors to the station can be met at Battle Creek by communicating in advance with Mr. Dorrance, or George A. Getman, the manager, route 1, Augusta.

Forage Crops and Diseases.—Pasture investigations, including experiments in pasture management, the renovation of old pastures, and comparison of different pasture plants and different fertilizers. A. B. Dorrance, agent, in charge.

East Lansing

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Botany Building, State Agricultural College. East Lansing is about 2½ miles from Lansing. Take street car in Lansing marked "College," going east on Michigan Avenue to end of line. College campus is about two blocks from there. (Work conducted in cooperation with State Agricultural College and Agricultural Experiment Station.)

State Agricultural College and Agricultural Experiment Station (cooperative investigations).—East Lansing is about 2½ miles from Lansing. Take street car in Lansing marked "College," going east on Michigan Avenue to end of line. College campus is about two blocks from there.

Fiber Plants.—Plant breeding with fiber flax; experiments in retting and scutching; experiments with hemp. B. B. Robinson, assistant plant breeder, in charge.

Horticultural Crops and Diseases.—Studies in connection with vegetable variety type bookwork on tomatoes. George Starr, collaborator, in charge.

Sugar Plants.—Cultural methods, crop rotations, effect of soils on yield and quality of sugar beets, and diseases of sugar beets. J. G. Lill, associate agronomist, in charge. Located in Agricultural Hall.

Plant breeding and varietal tests with sugar beets. E. E. Down, agent, in charge.

State Department of Agriculture.—Bureau of Agricultural Industry. Room 727, new State Office Building, corner of Washtenaw and Walnut Streets, one block west and one block south of the State Capitol. May be reached

from Union Station on cars marked "Washtenaw." Telephone, 21121; extension, 323.

Blister Rust Control.—Cooperative control of white-pine blister rust. D. J. Stouffer, agent and State leader, in charge.

South Haven

South Haven Horticultural Experiment Station, State Agricultural Experiment Station (cooperative investigations).—One-half mile from railroad station at South Haven, which may be reached by the Michigan Central or Pere Marquette Railroads. Telephone, 106.

Horticultural Crops and Diseases.—Nursery stock and rosaceous-fruit breeding investigations. Stanley Johnston, agent and superintendent, in charge.

MINNESOTA

St. Paul

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Plant Pathology Department, State College of Agriculture. University Farm is 4 or 5 miles from either Minneapolis or St. Paul. Take street car marked "Como-Harriet," get off at Doswell Avenue, and walk east one-third mile, or get off at Carter Avenue, and walk north one-third mile. (Work conducted in cooperation with State Agricultural Experiment Station and College of Agriculture.)

State Agricultural Experiment Station and College of Agriculture (cooperative investigations).—University farm is about 4 or 5 miles from either Minneapolis or St. Paul. Take street car marked "Como-Harriet," get off at Doswell Avenue, and walk east one-third mile, or get off at Carter Avenue, and walk north one-third mile. Telephone, Nestor 2881.

Cereal Crops and Diseases.—Genetic studies on wheat for rust resistance and winter hardiness. E. R. Ausemus, assistant pathologist, in charge. Located in plant-pathology department.

Extensive field, greenhouse, and laboratory studies on stem rust of wheat, oats, barley, rye, and related grasses, including the investigation of physiologic specialization of stem rust; studies on the susceptibility of species and varieties of Barberis and Mahonia; studies on the morphology and physiology of cereals with reference to their susceptibility to stem rust; and studies on the epidemiology of stem rust, including development of rust in the Southern States and in Mexico, possible movement of spores northward by surface and higher air currents, spread of rust to grains and grasses from infected barberries, the progress of epidemics once started on grains, and the establishment and direction of more than 50 uniform cooperative rust-differentiating nurseries in the United States and Canada. Life history and epidemiology studies of flax rust. E. C. Stakman, agent and pathologist, in charge. Located in plant-pathology department.

Cereal pathology garden for testing the resistance of different varieties, pure lines, and hybrid strains of cereals to different physiologic forms of the various fungi causing cereal diseases. R. H. Bamberg, agent, in charge.

Horticultural Crops and Diseases.—Potato breeding and seed-improvement work. F. A. Krantz, collaborator, has local supervision of the work.

State Department of Conservation, Office of Commissioner of Forestry and Fire Prevention.—Old State Capitol.

Blister Rust Control.—Cooperative control of white-pine blister rust. L. B. Ritter, agent and State leader, in charge. May be reached at office of commissioner of forestry and fire prevention.

MISSISSIPPI

A. and M. College

Citrus Canker Eradication Field Office.—Agricultural and Mechanical College. A. and M. College is on the Mobile & Ohio Railroad.

Direction of local activities in the eradication of citrus canker in Mississippi. R. W. Harned, State entomologist, in charge.

Stoneville

Delta Branch Station, Mississippi Agricultural Experiment Station (cooperative investigations.)—Located near Stoneville, 9 miles east of Greenville, which is on the Columbus & Greenville Railway and Illinois Central System, and may be reached by auto from the latter place. Telephone the superintendent regarding transportation arrangements.

Forage Crops and Diseases.—Investigations of alfalfa diseases; cultural, fertilizer, and varietal tests of alfalfa. Work directed from Washington, D. C.; local supervision by W. E. Ayres, assistant director and superintendent of the station.

West Point

United States Forage Crop Field Experiments (cooperative investigations, State Agricultural Experiment Station).—About 5 miles east of West Point on improved highway. West Point may be reached by the Columbus & Greenville and Mobile & Ohio Railroads, or Illinois Central System.

Forage Crops and Diseases.—Investigations of alfalfa diseases; cultural, fertilizer, and varietal tests of alfalfa; testing legumes adapted to the South; pasture investigations. T. F. Akers, assistant agronomist, in charge.

MISSOURI

Columbia

State Agricultural Experiment Station (cooperative investigations).—Within walking distance of the railroad station.

Cereal Crops and Diseases.—Investigations on corn culture, breeding, and genetics, including the effects of X-ray and radium treatments on inheritance. L. J. Stadler, agent and associate professor of field crops, in charge. Telephone, 140.

Cooperative Seed-Testing Laboratory.—At Agricultural Experiment Station. Telephone.

Seed Laboratory.—Testing agricultural seeds for mechanical purity and germination; identification of seeds of cultivated plants and weeds; testing seeds submitted in connection with enforcement of Federal seed act. W. C. Etheridge, collaborator, in charge; Clara Fuhr, junior botanist.

Elsberry

Elsberry Rice Experiment Field (cooperative investigations).—About 1½ miles south of Chicago, Burlington & Quincy Railroad station. May be reached by auto; no street cars.

Cereal Crops and Diseases.—Investigations of rice production, including irrigation, fertilizers, varietal comparisons, methods of seeding, breeding and selection for improvement, and rotation studies. Work directed from Washington, D. C., and Columbia, Mo. B. M. King, agent and instructor in field crops, in charge.

MONTANA

Bozeman

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads

the black stem rust of cereals. Office in Botany Department, State College of Agriculture, about 2 miles southwest of railroad station; may be reached by bus or on foot. (Work conducted in cooperation with State College of Agriculture.)

State College of Agriculture (cooperative investigations).—About 2 miles southwest of railroad station. May be reached by bus or on foot.

Cereal Crops and Diseases.—Breeding and genetic studies of wheat for quality, disease resistance, hardiness, and yield. Work directed from Washington, D. C.; local supervision by Clyde McKee, department of agronomy.

Havre

Northern Montana Substation, State Agricultural Experiment Station (cooperative investigations).—About 7 miles southwest of Havre, which is on the Great Northern Railway. Transportation arrangements may be made by communicating with G. W. Morgan. Telephone, 12–F–2.

Cereal Crops and Diseases.—Nursery and plot studies of adaptation, quality, and disease resistance of wheat. Work directed from Washington, D. C.; local supervision by G. W. Morgan, associate agronomist and superintendent.

Dry-Land Agriculture.—Dry-land crop rotations and production. G. W. Morgan, associate agronomist and superintendent, in charge.

Forage Crops and Diseases.—Field tests of forage crops, principally alfalfa, including also sorghums, sweetclover, grasses, root crops, corn and sunflowers for forage and silage, field peas, and grain hays. G. W. Morgan, associate agronomist and superintendent, has local supervision of the work.

Huntley

Huntley Field Station.—Four miles east of railroad station at Huntley, which is on the Northern Pacific and Chicago, Burlington & Quincy Railroads. Telephone Mr. Hansen regarding instructions for reaching the station or for transportation arrangements. Telephones, Home Telephone Co., 2–2; Riverside Telephone Co., 2–1,

Dry-Land Agriculture.—Dry-land crop rotations and production. A. E. Seamans, associate agronomist, in charge.

Western Irrigation Agriculture.—Irrigated rotation and tillage experiments, varietal tests, livestock investigations, and pasturing experiments in cooperation with Bureau of Animal Industry, and investigations on reclamation of alkali lands. Dan Hansen, associate agronomist and superintendent, in charge.

Missoula

State Department of Agriculture.—Blister Rust Control Office in new Federal Building.

Blister Rust Control.—Cooperative control of white-pine blister rust. C. H. Johnson, assistant pathologist and State leader, in charge.

Moccasin

Judith Basin Substation, State Agricultural Experiment Station (cooperative investigations).—About 1½ miles west of Moccasin (Great Northern Railway) on main graded highway. Transportation arrangements may be made by communicating with I. J. Jensen. Telephone, 14–F–30.

Cereal Crops and Diseases.—Agronomic investigations of cereals (wheat, oats, barley, corn, and flax), including varietal comparisons; rate, date, and method of seeding; and breeding and selection. Also breeding research on wheat

to develop an awnless winter-hardy variety and special studies on prevention of winterkilling in wheat. B. B. Bayles, assistant agronomist, in charge.

Dry-Land Agriculture.—Dry-land crop rotations and production. I. J. Jensen, agent and superintendent, in charge.

Forage Crops and Diseases.—Field tests of forage crops, principally alfalfa, including also sorghums, sweetclover, grasses, root crops, corn, and sunflowers for forage and silage, field peas, and grain hays. I. J. Jensen, agent and superintendent, has local supervision of the work.

NEBRASKA

Lincoln

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Plant Pathology Department, State College of Agriculture. University Farm is about 3 miles northeast of center of Lincoln. May be reached by bus marked "Agricultural College" or "University Place" at Eleventh and O Streets. (Work conducted in cooperation with State College of Agriculture.)

State College of Agriculture (cooperative investigations).—Located at University Farm, about 3 miles northeast of center of city. May be reached by taking bus marked "Agricultural College" or "University Place" at Eleventh and O Streets.

Cereal Crops and Diseases.—Limited cultural experiments with corn. T. A. Kiesselbach, agent and professor of agronomy, in charge.

Forage Crops and Diseases.—Alfalfa investigations; winter-hardiness investigations, including studies of the relative susceptibility of alfalfa varieties to cold, the development of a simple but accurate method of testing new strains for cold resistance, and the fundamen-

tal problems of winter hardiness; selection, breeding, and nursery tests of alfalfa, including a study of alfalfa varieties and origins; and a study of the interrelations between alfalfa productivity and the moisture supply. H. M. Tysdal, assistant agronomist, in charge.

Mitchell

Scotts Bluff Field Station.—Five miles east of the Chicago, Burlington & Quincy Railroad station. Telephone J. A. Holden regarding instructions for reaching the station or for transportation arrangements.

Western Irrigation Agriculture.—Irrigated rotation and tillage experiments, varietal tests of alfalfa and other crops, experiments with potatoes and investigations relating to the control of potato diseases, pasturing experiments, and livestock investigations. J. A. Holden, associate agronomist and superintendent, in charge.

North Platte

North Platte Substation, State Agricultural Experiment Station (cooperative investigations).—About 2 miles south of Union Pacific Railroad station. Transportation arrangements may be made by communicating with W. P. Snyder, the superintendent. Telephone, 499.

Cereal Crops and Diseases.—Agronomic and breeding experiments with corn and small grains. N. E. Jodon, junior agronomist, in charge. Telephone, 449.

Dry-Land Agriculture.—Dry-land crop rotations and production. L. L. Zook, associate physiologist, in charge. Telephone, 22–F–21.

NEVADA

Fallon

Newlands Field Station.—One mile south of Southern Pacific Railroad station. Telephone

E. W. Knight regarding instructions for reaching the station or for transportation arrangements.

Drug and Related Plants.—Field tests with safflower as an oil seed crop for the production of drying oils. Under direct supervision of E. W. Knight, assistant agronomist and superintendent.

Western Irrigation Agriculture.—Varietal tests of field crops under irrigation, especially grain; tests of horticultural crops; and field and laboratory experiments in the reclamation of alkali lands. E. W. Knight assistant agronomist and superintendent, in charge.

NEW HAMPSHIRE

Concord

State Forestry Department.—Room 304, Patriot Building, corner of Main and Park Streets, about five minutes' walk from railroad station. May be reached by telephone between 8.30 a. m. and 5 p. m., calling No. 800; at all other times No. 802.

Blister Rust Control.—Cooperative control of white-pine blister rust. L. E. Newman, agent and State leader, in charge. May be reached at office of State forester. Residence telephone, 1833.

NEW JERSEY

Toms River

Blueberry investigations. including growing and bringing to maturity, for purposes of observation and selection, blueberry hybrids produced by the United States Department of Agriculture. Work conducted by *Office of Botany* on property of Double Trouble Co., 5 miles southwest of Toms River, which is most easily reached from Philadelphia via the Pennsylvania Railroad and from New York via Central Railroad of New Jersey. May be reached by automobile from Toms River. H. B. Scammell, in charge. Telephone, Toms River 40–J.

FIGURE 1.—Outline map of the United States, showing
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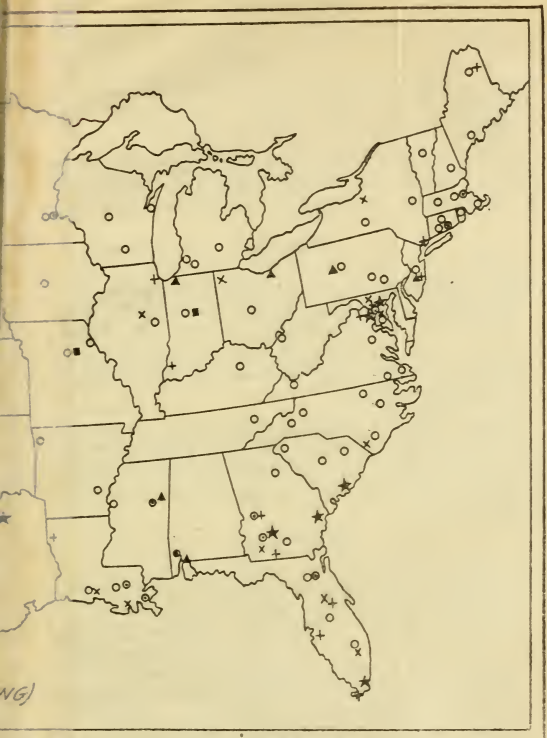

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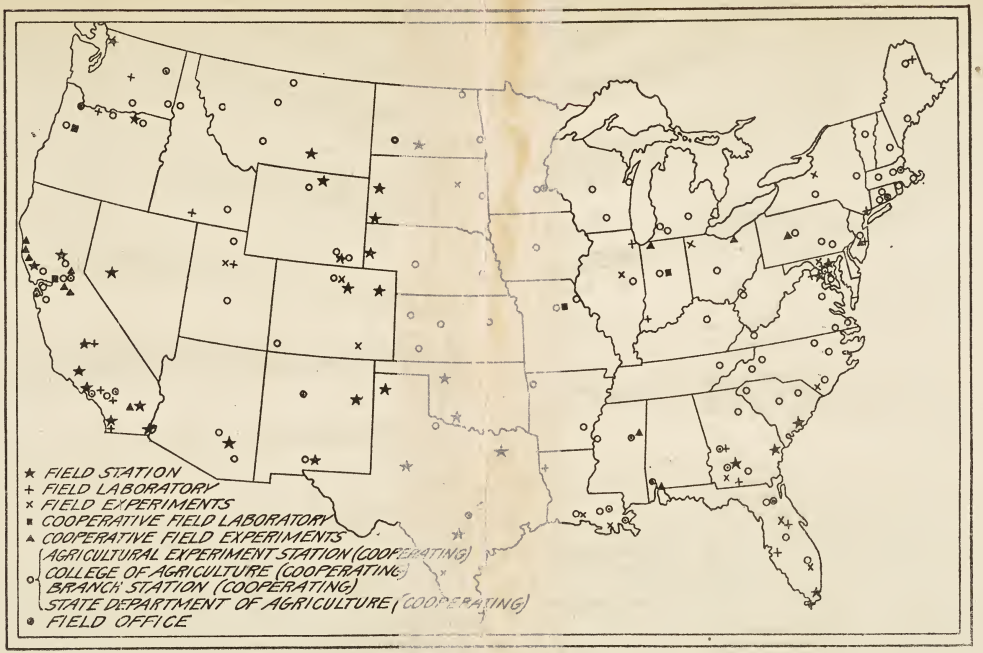

FIGURE 1.—Outline map of the United States, showing location and character of the field activities of the Bureau of Plant Industry

United States Cranberry and Blueberry Diseas Field Laboratory.—On property of Doubl Trouble Co., 5 miles southwest of Toms Rive which is most easily reached from Philadel phia via the Pennsylvania Railroad and fron New York via Central Railroad of New Jer sey. The laboratory may be reached by auto mobile from Toms River. Telephone Tom River 40–J.

Horticultural Crops and Diseases.—Investiga tion of diseases of cranberries and blueberries R. B. Wilcox, assistant pathologist, in charge.

Trenton

State Department of Agriculture.—Bureau of Statistics and Inspection. Room 903, Trenton Trust Co. Building, corner West State Street and Chancery Lane. May be reached on any street car going west at Pennsylvania Railroad station.

Blister Rust Control.—Cooperative control of white-pine blister rust. H. B. Weiss, cooperator, in charge. P. B. Mott, agent and State leader, located at 28 Harrison Street, Morristown, N. J.

Whitesbog

Blueberry investigations, including growing and bringing to maturity, for purposes of observation and selection, blueberry hybrids produced by the United States Department of Agriculture. Work conducted by *Office of Botany* on property of Joseph J. White (Inc.), Elizabeth C. White, cooperator, in charge. (Whitesbog is 4 miles east of Browns Mills, N. J., for which point trains leave from the Market Street Ferry station in Philadelphia; and 11 miles west of Lakehurst, N. J., on the Central Railroad of New Jersey. Auto and hotel accommodations may be obtained at either Browns Mills or Lakehurst.)

NEW MEXICO

Albuquerque

United States Forest Pathology Field Office.—244 Korber Building.

Forest Pathology.—Investigation of forest and ornamental tree diseases; direction of forest pathology activities for National Forest District 3 in cooperation with Forest Service. W. H. Long, senior pathologist, in charge.

State College

State Agricultural Experiment Station (cooperative investigations).—On campus of New Mexico College of Agriculture and Mechanic Arts, one-half mile from the Atchison, Topeka & Santa Fe Railway station.

Sugar Plants.—Breeding and variety testing with sugar beets. J. C. Overpeck, agent, in charge.

United States Acclimatization Field Station.—On mesa near buildings of the New Mexico College of Agriculture and Mechanic Arts, 1 mile from the Atchison, Topeka & Santa Fe Railway station at Mesilla Park and 3 miles from Las Cruces. Mail address, P. O. Box 92, State College; telegraph address, State College. Transportation arrangements may be made in advance by wiring or writing A. R. Leding.

Cotton, Rubber, and Other Tropical Plants.—Acclimatization and adaptation investigations, with particular attention to breeding and cultural improvement of cotton and rubber production investigations. A. R. Leding, chief scientific aid and superintendent, in charge.

Tucumcari

United States Dry-Land Field Station.—About 2 miles northeast of Tucumcari, which may be reached on the Chicago, Rock Island &

Pacific or Southern Pacific Railroads. Transportation arrangements may be made by communicating with D. R. Burnham. Telephone, 261.

Cereal Crops and Diseases.—Agronomic investigations with grain sorghums and broomcorn, including varietal comparisons and rates and dates of seeding. Work directed from Washington, D. C.; local supervision by D. R. Burnham, associate agronomist and superintendent.

Dry-Land Agriculture.—Dry-land crop rotations and production, varietal tests and investigations on rate and date of seeding of cotton, steer feeding and range-cattle feeding experiments in cooperation with New Mexico College of Agriculture and Bureau of Animal Industry. D. R. Burnham, associate agronomist and superintendent, in charge.

Forage Crops and Diseases.—Agronomic investigations with forage sorghums, Sudan grass, and cowpeas. Work directed from Washington, D. C.; local supervision by D. R. Burnham, associate agronomist and superintendent.

NEW YORK

Albany

State Conservation Department.—23 Pearl Street, about five minutes' walk from railroad station. May be reached by street car.

Blister Rust Control.—Cooperative control of white-pine blister rust. H. L. McIntyre, collaborator and State leader, in charge. May be reached at office of superintendent of lands and forests.

Baldwinsville

United States Tobacco Field Experiments.—About 1 mile west of center of Baldwinsville, which is on the Delaware, Lackawanna & Western Railroad. May be reached by conveyance. No telephone.

Tobacco and Plant Nutrition.—Fertilizer and crop-rotation tests, with special reference to tobacco. G. W. Harris, principal scientific aid, in charge.

Ithaca

Cornell University Agricultural Experiment Station (cooperative investigations).—Take street car east to campus and walk one-half mile east to Agricultural College.

Cereal Crops and Diseases.—Varietal comparisons of wheat, oats, and barley; extensive breeding operations and studies of inheritance characteristics in wheat; and extensive oat-breeding experiments. W. T. Craig, agent, in charge. Telephone, 2252.

Investigations of cytology and embryogeny of corn. L. F. Randolph, associate cytologist, in charge. Located in botany department. Telephone, 2194.

Investigations of cytology of small grains. Ernest Dorsey, agent, in charge. Located in plant-breeding department. Telephone, 2252.

Horticultural Crops and Diseases.—Studies in connection with vegetable variety type bookwork on tomatoes. Paul Work, collaborator, in charge.

New York City

United States Market Pathology Field Laboratory.—53 Park Place, near market section, about two blocks from subway station.

Horticultural Crops and Diseases.—Investigation of market diseases of fruits. In cooperation with the Fruit and Vegetable Division of the Bureau of Agricultural Economics. L. F. Butler, associate pathologist, in charge.

NORTH CAROLINA

Asheville

Appalachian Forest Experiment Station (cooperative investigations).—Office in Forest Service headquarters, 612 City Hall.

Forest Pathology.—Investigations of forest-tree diseases. R. M. Nelson, assistant pathologist, in charge.

Chadbourn

United States Strawberry Disease Field Laboratory.—On North Carolina Route 20, about 1 mile from the Atlantic Coast Line Railroad station. May be reached by automobile. Telephone.

Horticultural Crops and Diseases.—Investigations of strawberry diseases, especially the "dwarf" disease, and root rots. N. E. Stevens, senior pathologist, in charge (spring growing season only).

Oxford

Tobacco Branch Station of State Agricultural Experiment Station and State Department of Agriculture (cooperative investigations).—One mile southwest of Oxford, which is on the Seaboard Air Line and the Southern Railway; may be reached by automobile.

Tobacco and Plant Nutrition.—Seed selection; fertilizer and crop-rotation tests; experiments in tobacco curing and tobacco diseases. E. G. Moss, senior agronomist, in charge. Telephone, 41–J.

Rocky Mount

Upper Coastal Plain Branch Station of State Agricultural Experiment Station and State Department of Agriculture (cooperative investigations).—Located 7½ miles east of Rocky Mount (Atlantic Coast Line Railroad) on the Cokey Road. Mr. Young may be communicated with by telephone, calling Edgecombe Test Farm, No. 5202.

Tobacco and Plant Nutrition.—Tobacco varietal tests; fertilizer and crop rotation experiments with tobacco. J. P. Young, scientific aid, in charge.

Statesville

Piedmont Branch Station of State Agricultural Experiment Station and State Department of Agriculture (cooperative investigations).—One and one-half miles northwest of Statesville, which is on the Southern Railway. F. T. Meacham, superintendent, may be communicated with by telephone.

Forage Crops and Diseases.—Variety and strain tests of alfalfa; tests of imported and domestic red-clover seed of known origin, comparison of fall and spring seeding of red clover; cultural and strain tests of sweetclover. Local supervision by F. T. Meacham, superintendent.

Willard

Coastal Plain Branch Station of State Agricultural Experiment Station and State Department of Agriculture (cooperative investigations).—One mile north of railroad station at Willard (Atlantic Coast Line Railroad). Transportation arrangements may be made by communicating with C. T. Dearing. Telephone, 1–3.

Botany.—Blueberry investigations. C. T. Dearing, associate horticulturist and superintendent, in charge. (Cooperative experimental plantings are located near Clinton on property of William Peterson and near Kenansville on property of C. M. Ingram.)

Horticultural Crops and Diseases.—Muscadine grape, small fruit, and bulb investigations. C. T. Dearing, associate horticulturist and superintendent, in charge.

NORTH DAKOTA

Dickinson

Dickinson Substation, State Agricultural Experiment Station (cooperative investigations).—About 1 mile northwest of Dickinson

(Northern Pacific Railway). Transportation arrangements may be made by communicating with Leroy Moomaw. Telephone, 215–W.

Cereal Crops and Diseases.—Agronomic investigations of cereals, principally wheat, oats, barley, flax, and corn, including varietal comparisons; rates, dates, and methods of seeding; breeding and selection; also special study of northern short-season corns and of weed control in flax. R. W. Smith, associate agronomist, in charge.

Dry-Land Agriculture.—Dry-land crop rotations and production. Leroy Moomaw, associate agronomist and superintendent, in charge.

Fargo

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Biology Building, State Agricultural College, about 1½ miles northwest of Fargo. Take street car marked "Agricultural College." (Work conducted in cooperation with State Agricultural College and Experiment Station.)

State Agricultural College and Experiment Station (cooperative investigations).—About 1½ miles northwest of city. Take street car marked "Agricultural College."

Cereal Crops and Diseases.—Wheat-improvement studies, including breeding and testing for disease resistance. Work directed from Washington, D. C.; local supervision by L. R. Waldron, agronomist in plant breeding.

Pathologic experiments on diseases of flax (except flax rust), including flax wilt, two kinds of flax canker, and the pasmo disease. L. W. Boyle, assistant pathologist, in charge. Biology Building. Telephone, 4903.

Drug and Related Plants.—Field tests with safflower as an oilseed crop for the production of drying oils. Local supervision by P. F. Trowbridge, director of the station.

Langdon

Langdon Substation, State Agricultural Experiment Station (cooperative investigations).—About 1 mile east of Langdon (Great Northern Railway). Arrangements for transportation may be made by communicating with Victor Sturlaugson, superintendent, or G. S. Smith. Telephone, 19–F–1.

Cereal Crops and Diseases.—Investigations in the improvement of wheat, principally methods of production and breeding varieties for quality and disease resistance. G. S. Smith, junior agronomist, in charge. Telephone, 19–F–1.

Mandan

United States Northern Great Plains Field Station.—About 1 mile southwest of Mandan (Northern Pacific Railway). May be reached by auto, or transportation arrangements may be made by telephoning the station, calling 348.

Cereal Crops and Diseases.—Extensive agronomic and genetic studies on seed flax, including breeding for resistance to flax wilt and rust and cultural methods to control weeds. J. C. Brinsmade, jr., assistant agronomist, in charge.

Varietal comparisons of wheat, oats, and barley, and extensive spring-wheat breeding experiments for resistance to rust and drought and improvement in quality. V. C. Hubbard, junior agronomist, in charge.

Varietal and improvement studies on corn. Work directed from Washington, D. C.; local supervision by officials at the station.

Dry-Land Agriculture.—Dry-land crop rotations and production; study of effect of grazing upon native vegetation; varietal testing, breeding, and cultural experiments with fruits, orna-

mental plants, and garden vegetables; shelter-belt investigations and distribution in cooperation with farmers; dairy investigations in cooperation with the Bureau of Dairy Industry. J. M. Stephens, principal agriculturist and superintendent, in charge. E. J. George, agent, in charge of shelter-belt investigations; J. T. Sarvis, associate agronomist, in charge of agronomic and grazing investigations; W. P. Baird, associate horticulturist, in charge of horticultural investigations.

Forage Crops and Diseases.—Varietal tests with alfalfa adapted to dry-land conditions; comparison tests with grasses, sweetclover, sorghums, and sunflowers for silage. J. M. Stephens, principal agriculturist and superintendent, has local supervision of the work.

OHIO

Columbus

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Botany Department, State College of Agriculture, about 3 miles from railroad station at Columbus; may be reached by street car. (Work conducted in cooperation with State College of Agriculture.)

State College of Agriculture (cooperative investigations).—About 3 miles from railroad station at Columbus. May be reached by street car.

Cereal Crops and Diseases.—Genetic studies with corn; breeding experiments with field corn and sweet corn, including extensive tests of inbred strains for possible resistance or tolerance to corn-borer attack. (Duplicate plantings are made also at Bono, in cooperation with the Ohio Agricultural Experiment Station.) L. R. Jorgenson, assistant agronomist, in charge. Located in farm-crops department. Telephone, University 3148; station, 445.

Holgate

Northwestern Experiment Farm, State Agricultural Experiment Station (cooperative investigations).—About one-half mile south of Holgate, which is on the Baltimore & Ohio Railroad.

Forage Crops and Diseases.—Source of seed tests of alfalfa and red clover; soybean variety, cultural, breeding and utilization investigations. David Heusinkveld, junior agronomist, in charge. J. L. Cartter, agent, in charge of soybean investigations.

North Ridgeville

United States Forage Crop Field Experiments.—Two miles west of North Ridgeville; 3 miles east of Elyria. Most easily reached from the latter place, electric cars leaving there every hour. Get off at stop 70, Cleveland Road; experimental plots located across road.

Forage Crops and Diseases.—Breeding and developing strains of timothy; testing alfalfa, clover, soybeans, and field peas. M. W. Evans, associate agronomist, in charge. Telephone, 30–322.

Wooster

Ohio Agricultural Experiment Station (cooperative investigations).—About 1 mile south of Wooster, which may be reached by the Baltimore & Ohio or Pennsylvania Railroads. Station may be reached by auto; no street cars.

Cereal Crops and Diseases.—Investigations on the breeding and physiology of corn and on methods of corn production, with special reference to reducing damage by the European corn borer. J. S. Sayre, agent and assistant plant physiologist, in charge (physiology), and ———,

agent and assistant agronomist, in charge (agronomy), under the general direction of R. M. Salter, chief of department of agronomy.

OKLAHOMA

Lawton

United States Dry-Land Field Station.—About 1½ miles north of Lawton (Chicago, Rock Island & Pacific and St. Louis-San Francisco Railways). Take Fort Sill trolley to station, or communicate with W. M. Osborn regarding transportation arrangements. Telephone, 21–W.

Cereal Crops and Diseases.—Agronomic investigations with grain sorghums and broomcorn, including varietal comparisons and rates and dates of seeding. Work directed from Washington, D. C.; local supervision by W. M. Osborn, associate agronomist and superintendent.

Dry-Land Agriculture.—Dry-land crop rotations and production; varietal tests and investigations on rate and date of seeding of cotton; study of chinch-bug control in cooperation with Bureau of Entomology. W. M. Osborn, associate agronomist and superintendent, in charge.

Forage Crops and Diseases.—Agronomic investigations with forage sorghums, sweetclover, and grasses. Work directed from Washington, D. C.; local supervision by W. M. Osborn, associate agronomist and superintendent.

Woodward

United States Dry-Land Field Station.—About 1 mile southwest of Woodward (Atchison, Topeka & Santa Fe and Missouri, Kansas & Texas Railways). Transportation arrangements may be made by communicating with E. F. Chilcott. Telephone, 99–J.

Cereal Crops and Diseases.—Extensive agronomic investigations of grain sorghums and broomcorn, including varietal comparisons; studies of rates and dates of seeding and the spacing of rows and of plants in the row; hybridization and selection; and genetic studies. J. B. Sieglinger, agronomist, in charge.

Dry-Land Agriculture.—Dry-land crop rotations and production, horticultural and vineyard investigations, forestry investigations, dairy investigations in cooperation with the Bureau of Dairy Industry, investigations and cooperative shelter-belt distribution with farmers. E. F. Chilcott, senior agriculturist and superintendent, in charge.

Forage Crops and Diseases.—Agronomic investigations with forage sorghums, cowpeas, and grasses. Work directed from Washington, D. C.; local supervision by E. F. Chilcott, agriculturist and superintendent.

OREGON

Corvallis

State Agricultural Experiment Station (cooperative investigations).—About 1 mile from center of town; may be reached by street car.

Blister Rust Control.—Cooperative control of white-pine blister rust. L. N. Goodding, associate pathologist and State leader, in charge. Located in department of botany and plant pathology.

Cereal Crops and Diseases.—Investigation of foot-rot diseases of cereals, especially wheat Roderick Sprague, assistant pathologist, in charge. Located in department of botany and plant pathology.

Drug and Related Plants.—Experiments with roses to determine the feasibility of domestic rose culture for perfume production. Work directed from Washington, D. C.; local supervision by the horticulturist of the station.

Fiber Plants.—Experiments with fiber flax, cultural experiments on experiment station farm, and field tests on farms of fiber-flax growers. D. D. Hill, assistant agronomist of the experiment station, in charge.

Forage Crops and Diseases.—Agronomic investigations of forage crops, including vetches, clovers, grasses, alfalfa, and miscellaneous legumes; plot experiments in studies of rates and dates of seeding; varietal comparison; studies in hybridization and selection. H. A. Schoth, associate agronomist, in charge.

Horticultural Crops and Diseases.—Investigation of virus diseases of potatoes and diseases of ornamental bulbs. M. B. McKay, agent, in charge. Located in Agricultural Building. Telephone, 107.

Cooperative Seed-Testing Laboratory.—At Agricultural Experiment Station.

Seed Laboratory.—Testing agricultural seeds for mechanical purity and germination; identification of seeds of cultivated plants and weeds; testing seeds submitted in connection with enforcement of Federal seed act. G. R. Hyslop, collaborator, in charge; Bertha C. Hite, assistant botanist.

Hermiston

Umatilla Field Station.—About 2 miles north of railroad station at Hermiston, which is on the Oregon Short Line Railroad (Union Pacific System). Telephone H. K. Dean regarding transportation arrangements.

Drug and Related Plants.—Experiments with the propagation of *Artemisia cina*, a plant yielding the drug santonin, and field tests to determine the commercial possibilities of this plant as a crop in the United States. Work directed from Washington, D. C.; local super-

vision by H. K. Dean, associate agronomist and superintendent.

Western Irrigation Agriculture.—Irrigated rotation and tillage experiments; alkali and fertilizer pot tests; field commercial-fertilizer tests; variety tests of corn and alfalfa; tests of pasture grasses and irrigation methods; experiments in hog and sheep feeding. H. K. Dean, associate agronomist and superintendent, in charge.

Hood River

United States Fruit Disease Field Laboratory.—Rooms 22 and 23, Pythian Building, about two blocks from Union Pacific System station. Telephone, 1304.

Horticultural Crops and Diseases.—Investigations of perennial canker and related apple and pear diseases occurring in this and adjacent sections of Washington and Oregon. J. S. Cooley, senior pathologist, in charge.

Moro

Sherman County Branch Station, State Agricultural Experiment Station (cooperative investigations).—Most convenient way to reach Moro (Union Pacific System) from the main line is by bus (four daily) from The Dalles, by the Union Pacific and Columbia Gorge companies. A night wait now is required at Biggs to make connections from main-line trains. Telephone, Main 281.

Cereal Crops and Diseases.—Extensive agronomic investigations of dry-land cereals, chiefly wheat, oats, and barley, and of methods of cereal production, including classification; varietal comparisons; genetics and breeding; rates, dates, and methods of seeding; tillage; seed-bed preparation; fallowing methods; and rotation effects. D. E. Stephens, senior agronomist and superintendent, in charge.

Pendleton

Pendleton Field Station, State Agricultural Experiment Station (cooperative investigations.)—Ten miles northeast of Pendleton (Union Pacific System). Union Pacific and Columbia Gorge bus lines out of Pendleton run within 2 miles of field station. Havana is the nearest rail station on the Pendleton-Walla Walla branch of the Union Pacific. Post-office address, box 672, Pendleton. Telephone, Pendleton 119. Communicate with Mr. Mitchell regarding transportation arrangements.

Dry-Land Agriculture.—Dry-land crop rotations and production. G. A. Mitchell, assistant agronomist, in charge.

Portland

United States Forest Pathology Field Office.—Room 428, new post-office building.

Forest Pathology.—Investigations of forest and ornamental tree diseases; direction of forest pathology activities for National Forest District 6, in cooperation with the Forest Service. H. G. Lachmund, pathologist, in charge.

PENNSYLVANIA

Ephrata

State Branch Station, Agricultural Experiment Station (cooperative investigations).—Located on farm of Mrs. George Hibshman, one-half mile north of Ephrata, on Denver-Reading Road. May be reached by automobile.

Tobacco and Plant Nutrition.—Improvements in methods of handling tobacco seed beds and curing; tobacco breeding, including development of strains and types of high and low

nicotine content; fertilizer tests. Otto Olson, associate agronomist, in charge. Telephone, Independent 221–J.

Harrisburg

State Department of Agriculture.—Room 108, South Office Building, State Capitol. Three minutes' walk from Pennsylvania Railroad station north on Aberdeen Street; four minutes' walk from Philadelphia & Reading Railway station west through Market Street subway and north on Aberdeen Street.

Blister Rust Control.—Cooperative control of white-pine blister rust. W. A. McCubbin, collaborator, in charge.

Kylertown

United States Forage Crop Field Experiments (cooperative investigations, Agricultural Experiment Station).—Experiments located near Kylertown, which is on a State highway 45 miles northwest of State College. Reached by Pennsylvania Railroad to Tyrone and bus from there to Kylertown.

Forage Crops and Diseases.—Pasture investigations, including tests of carrying capacity and productiveness under grazing conditions; comparisons of a large number of grasses and legumes in pure cultures on small plots; also tests of fertilizers. G. C. Fuller, agent, in charge.

State College

State Agricultural Experiment Station (cooperative investigations).—Twenty-eight miles from Tyrone, which is on the Pennsylvania Railroad. Busses meet trains for State College.

Horticultural Crops and Diseases.—Studies in connection with vegetable variety type bookwork on cabbage. J. E. Knott, collaborator, in charge.

PHILIPPINE ISLANDS

Manila

Investigations on improvement of abacá and maguey industries, conducted by *Office of Fiber Plants* in cooperation with Philippine Bureau of Agriculture. Work directed from Washington, D. C.; H. T. Edwards, senior technologist, in charge.

PORTO RICO

Mayaguez

Porto Rico Agricultural Experiment Station (cooperative investigations).—About one-half mile north of central part of Mayaguez, or little more than a mile from the railroad station. May be reached by conveyance or on foot.

Fiber Plants.—Plant breeding with henequen and sisal; propagation of abacá (manila hemp) for the development of stocks for experimental planting; propagation of kapok, pochote, and allied plants. Rafael Vidal, agent, in charge.

RHODE ISLAND

Providence

Brown University (cooperative investigations).—About 1 mile from railroad station; reached by street car from Exchange Place, near the station.

Forest Pathology.—Investigation of diseases of shade and ornamental trees and shrubs. J. F. Collins, senior pathologist, in charge. In basement of Maxcy Hall.

State Board of Agriculture.—Room 310, State House. About five minutes' walk from the railroad station. Telephone.

Blister Rust Control.—Cooperative control of white-pine blister rust. A. W. Hurford, agent and State leader, in charge.

SCOTLAND

Edinburgh

Mycological Laboratories of Royal Botanic Garden (cooperative investigations).—On Inverleith Road, about 2 miles from Princess Street. Reached by trams from Princess Street.

Forest Pathology.—Investigations of Douglas-fir and European-larch cankers. Malcolm Wilson, specialist in forest pathology, in charge.

SOUTH CAROLINA

Clemson College

State Agricultural Experiment Station (cooperative investigations).—Located about 1½ miles from Calhoun, which is on the main line of the Southern Railway. Bus service.

Horticultural Crops and Diseases.—Studies in connection with vegetable variety type bookwork on cabbage. R. A. McGinty, collaborator, in charge.

Columbia

Sand Hill Experiment Station, State Agricultural Experiment Station (cooperative investigations).—About 14 miles north of Columbia on Dixie Highway, near Pontiac, S. C., on Seaboard Air Line, but best reached by bus from Columbia. Call the station by long distance from Columbia regarding transportation arrangements. Mail address, R. F. D. 5, Columbia.

Forage Crops and Diseases.—Agronomic investigations with soybeans, cowpeas, velvetbeans, pigeon peas, crotolarias, vetches, winter peas, and sorghums. Green-manure and cover-crop studies in cooperation with Soil Fertility Division, Bureau of Chemistry and Soils. Pasture investigations and tests of newly introduced grasses and legumes. A. S. Laird, agent, in charge.

Florence

Pee Dee Experiment Station, State Agricultural Experiment Station (cooperative investigations).—About 3 miles north of railroad station (Atlantic Coast Line and Seaboard Air Line Railways), or 2½ miles from center of town on Darlington Road. May be reached by auto. Telephone, 4002.

Cereal Crops and Diseases.—Limited corn-breeding experiments. Work directed from Washington, D. C.; local supervision by R. E. Currin, superintendent.

Horticultural Crops and Diseases.—Investigations with peanuts and sweetpotatoes, including crop improvement by selection and methods of culture and handling. Work directed from Washington, D. C.; local supervision by R. E. Currin, superintendent.

James Island

United States Acclimatization Field Station.—On James Island, 12 miles from Charleston. Mail address, box 153, Charleston; telegraph address, Charleston. Transportation arrangements may be made in advance by wiring or writing D. M. Simpson. Telephone, 8105.

Cotton, Rubber, and Other Tropical Plants.—Acclimatization and adaptation investigations, with particular attention to the breeding and cultural improvement of cotton. D. M. Simpson, associate agronomist and superintendent, in charge.

SOUTH DAKOTA

Ardmore

United States Dry-Land Field Station.—About 2 miles northwest of Ardmore (Chicago, Burlington & Quincy Railroad). Telephone O. R. Mathews regarding transportation arrangements, calling 61 on 43.

Dry-Land Agriculture.—Dry-land rotations and production; shelter-belt investigations; swine investigations and steer-grazing investigations in cooperation with the Bureau of Animal Industry; and dairy investigations in cooperation with the Bureau of Dairy Industry. O. R. Mathews, associate agronomist and superintendent, in charge.

Brookings

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in Extension Service, State College of Agriculture, about 1 mile northeast of center of Brookings, which is on the Chicago & North Western Railway. May be reached by auto or on foot. (Work conducted in cooperation with State College of Agriculture, Agricultural Experiment Station, and Extension Service.)

State College of Agriculture, Agricultural Experiment Station, and Extension Service (cooperative investigations).—About 1 mile northeast of center of Brookings, which is on the Chicago & North Western Railway. May be reached by auto or on foot.

Cereal Crops and Diseases.—Breeding nurseries for the improvement of wheat in adaptation, quality, and disease resistance (located in Brookings and the substations at Eureka and Highmore). Work directed from Washington, D. C.; local supervision by A. N. Hume, agronomist and superintendent of the substations.

Newell

Belle Fourche Field Station.—About 2½ miles northwest of Chicago & North Western Railway station. Telephone Beyer Aune regarding transportation arrangements, calling 12–F–2.

Drug and Related Plants.—Field tests with safflower and hemp as seed crops for the pro-

duction of drying oils. Work directed from Washington, D. C.; local supervision by Beyer Aune, associate agronomist and superintendent.

Dry-Land Agriculture.—Dry-land crop rotations and production. Albert Osenbrug, associate agronomist, in charge. Telephone, 12–F–2.

Western Irrigation Agriculture.—Irrigated rotation and tillage experiments, varietal tests, livestock investigations, and pasturing experiments in cooperation with Bureau of Animal Industry, and investigations in the drainage of seeped lands. Beyer Aune, associate agronomist and superintendent, in charge.

Redfield

United States Cereal Field Experiments.—About 1 mile east of Redfield, which may be reached on the Chicago & North Western and the Chicago, Milwaukee, St. Paul & Pacific Railroads.

Cereal Crops and Diseases.—Breeding and improvement of cereal crops, especially wheat, for adaptation, quality, and resistance to diseases, particularly rusts and smuts. E. S. McFadden, associate agronomist, in charge.

United States Forage Crop Field Experiments.—About 1 mile east of Redfield (Chicago & North Western and Chicago, Milwaukee, St. Paul & Pacific Railroads). Telephone, 240 Red.

Forage Crops and Diseases.—Developing varieties of alfalfa and investigating cultural methods; conducting agronomic investigations with other forage crops, and experiments with silage. Samuel Garver, associate agronomist, in charge.

TENNESSEE

Knoxville

State Agricultural Experiment Station (cooperative investigations).—About 10 minutes'

ride by street car from railroad station. Telephone University of Tennessee Farm 48.

Cereal Crops and Diseases.—Agronomic and genetic studies of corn, including varietal comparisons, cultural studies, and breeding experiments. L. S. Mayer, assistant agronomist, in charge.

Testing wheat selections for leaf-rust resistance. Work directed from Washington, D. C.

Tobacco and Plant Nutrition.—Burley tobacco investigations, including determination of types of soil best adapted to Burley; fertilizer requirements of Burley tobacco; methods of growing, handling, and curing Burley tobacco. H. W. Jones, agent. in charge.

TEXAS

Austin

Citrus Canker Eradication Field Office.—State Department of Agriculture. Direction of local activities in the eradication of citrus canker in Texas. J. M. Del Curto, collaborator, in charge.

Big Spring

United States Dry-Land Field Station.—One mile north of Big Spring (Texas & Pacific Railway). Telephone F. E. Keating regarding transportation arrangements, calling 330.

Cereal Crops and Diseases.—Agronomic investigations with grain sorghums and broomcorn, including varietal comparisons and rates and dates of seeding. Work directed from Washington, D. C.; local supervision by F. E. Keating, associate agronomist and superintendent.

Dry-Land Agriculture.—Dry-land crop rotations and production, varietal tests and investigations on rate and date of seeding of cotton, and varietal tests of fruits and grapes. F. E. Keating, associate agronomist and superintendent, in charge.

Forage Crops and Diseases.—Agronomic investigations with forage sorghums, Sudan grass, sweetclover, and cowpeas. Work directed from Washington, D. C.; local supervision by F. E. Keating, associate agronomist and superintendent.

Chillicothe

Substation No. 12, State Agricultural Experiment Station (cooperative investigations).—Four and one-half miles south and a little west, on the main highway, from Chillicothe, which is on the Fort Worth & Denver City Railway. Telephone J. R. Quinby, the superintendent, regarding transportation.

Forage Crops and Diseases.—Agronomic investigations with dry-land forage crops, principally sorghums, but including cowpeas, sweetclover, alfalfa grasses, and winter peas. Special attention is given to the breeding of new sorghum varieties and the study of sorghum genetics, also to the morphology of Johnson grass. J. C. Stephens, assistant agronomist, in charge.

College Station

State Agricultural Experiment Station (cooperative investigations).—College Station is on the Missouri Pacific and Southern Pacific Railroads. Communicate with P. C. Mangelsdorf, agronomist at the station, regarding transportation.

Drug and Related Plants.—Field tests with safflower as an oilseed crop for the production of drying oils. Under direct supervision of P. C. Mangelsdorf, agronomist at the experiment station.

Dalhart

United States Dry-Land Field Station.—Three miles southwest of Dalhart, which is on the Chicago, Rock Island & Pacific and Fort

Worth & Denver City Railways. Telephone B. F. Barnes regarding transportation arrangements, calling 90.

Cereal Crops and Diseases.—Agronomic investigations with grain sorghums and broomcorn, including varietal comparisons and rates and dates of seeding. Work directed from Washington, D. C.; local supervision by B. F. Barnes, agent and superintendent.

Dry-Land Agriculture.—Dry-land crop rotations and production; varietal tests and investigations on rate and date of seeding of cotton; forestry investigations in cooperation with Forest Service. B. F. Barnes, agent and superintendent, in charge.

Forage Crops and Diseases.—Agronomic investigations with forage sorghums, Sudan grass, and cowpeas. Work directed from Washington, D. C.; local supervision by B. F. Barnes, agent and superintendent.

Greenville

United States Cotton Breeding Field Station.—Five miles southwest of Greenville, which is on the Southern Pacific and Missouri, Kansas & Texas railroads. Transportation arrangements may be made in advance by writing or wiring H. C. McNamara or by telephoning 402–J or 402–W.

Cotton, Rubber, and Other Tropical Plants.—Acclimatization and adaptation investigations, with particular attention to breeding and cultural improvement of cotton. H. C. McNamara, associate agronomist and superintendent, in charge.

Cotton disease investigations, with special reference to cotton root rot and control methods. D. C. Neal, senior pathologist, in charge.

Laredo

United States Date Experiments.—About 5 miles southwest of Laredo (Missouri Pacific Railroad). Telephone connections at Richter ranch (August C. Richter, proprietor).

Horticultural Crops and Diseases.—Testing date varieties to find those adapted to the upper Rio Grande region. Work directed by W. T. Swingle from Washington, D. C.; local supervision by H. E. Watson, collaborator.

San Antonio

United States San Antonio Field Station.—About 5 miles south of San Antonio. Street cars run within 1 mile of station; may also be reached by auto from railroad station. Telephone G. T. Ratliffe regarding instructions for reaching there.

Cereal Crops and Diseases.—Varietal tests of seed flax, and an extensive nursery for the classification of flax varieties. Work directed from Washington, D. C.; local supervision by G. T. Ratliffe, associate agronomist and superintendent.

Western Irrigation Agriculture.—Rotation and tillage experiments; breeding, cultural, varietal, and boll-weevil tests with cotton; experiments in the control of cotton root rot; adaptation and varietal tests of sorghums, legumes, and grasses; and adaptation, varietal, and cultural tests of economic and ornamental plants. G. T. Ratliffe, associate agronomist and superintendent, in charge.

UTAH

Ephraim

Great Basin Experiment Station, Forest Service (cooperative investigations).—Post-office address, Great Basin Experiment Station, Og-

den, Utah. Arrangements for visiting the experimental areas at Ephraim should be made with C. L. Forsling, director of the station.

Forage Crops and Diseases.—Investigations of the possibility of establishing sweetclover on depleted range lands; experiments, including cultural tests and adaptability tests of sweetclover strains, are conducted at three different elevations in the mountains. Local supervision of the work by C. L. Forsling, director of the station.

Logan

State Agricultural Experiment Station (cooperative investigations).—About 1 mile east of Oregon Short Line Railroad station. Take bus to the experiment station.

Sugar Plants.—Investigations of diseases of sugar beets, especially root rot, and their control. C. M. Tompkins, assistant pathologist, in charge.

Salt Lake City

Nema Field Laboratory.—319 Post Office Building. May be reached by street car. Telephone, Wasatch 4075.

Nematology.—Investigations in plant-parasitic, predaceous, and free-living nemas, especially the sugar-beet and alfalfa nematodes. Gerald Thorne, associate nematologist, in charge.

United States Sugar Plant Field Station.—Office and laboratory, 1810 South Main Street. May be reached by street car from railroad station.

Sugar Plants.—Investigations on sugar beet genetics, physiology, pathology, and agronomy. Experimental work chiefly devoted to investigation of the curly top disease. ————, in charge.

VERMONT

Montpelier

State Forest Service.—In statehouse, opposite railroad station.

Blister Rust Control.—Cooperative control of white-pine blister rust. R. M. Ross, collaborator, in charge. May be reached at office of State forester.

VIRGINIA

Blacksburg

State Agricultural Experiment Station (cooperative investigations).—Eight miles from Christiansburg; busses meet all trains.

Fiber Plants.—Developing improved strains of hemp and production of seed for experimental purposes. Work directed from Washington, D. C.; local supervision by M. S. Kipps, of the experiment station.

Bowling Green

Caroline County Station, State Agricultural Experiment Station (cooperative investigations).—Three and one-half miles north of Bowling Green on road leading to Fredericksburg; may be reached by automobile. The railroad station is Milford, about 2¾ miles southwest of Bowling Green.

Tobacco and Plant Nutrition.—Crop-rotation studies, with special reference to tobacco. W. W. Green, agent, in charge. Mr. Green may be reached by telephone.

Diamond Springs

Virginia Truck Experiment Station (cooperative investigations).—Reached by Beach electric train from Norfolk. Address, Norfolk, box 88. Telephone, Juniper 28–F–2.

Horticultural Crops and Diseases.—Potato and nursery-stock investigations. Local supervision of the work by T. C. Johnson, director of the station.

Studies in connection with the vegetable variety type bookwork on cabbage. H. H. Zimmerley, collaborator, in charge.

East Falls Church

Nema Field Laboratory.—In the building of the United States Entomological Laboratory. To reach from Washington, D. C., take Falls Church car on Arlington & Fairfax Railway, either at Twelfth Street and Pennsylvania Avenue NW. or at the Department of Agriculture, Fourteenth and B Streets SW., and get off at East Falls Church; laboratory about one-fourth mile east of car stop on Lee Highway. May also be reached by Falls Church bus from Twelfth Street and Pennsylvania Avenue NW., or by auto via Georgetown, Key Bridge, Rosslyn, and Lee Highway. Telephone, Falls Church 144.

Nematology.—Investigations of plant-infesting nemas, especially their specificity with respect to host plants; investigations of nemic parasites of insects. J. R. Christie, associate nematologist, in charge.

United States Strawberry Disease Field Laboratory.—In the building of the United States Entomological Laboratory. To reach from Washington, D. C., take Falls Church car on Arlington & Fairfax Railway, either at Twelfth Street and Pennsylvania Avenue NW. or at the Department of Agriculture, Fourteenth and B Streets SW., and get off at East Falls Church; laboratory about one-fourth mile east of car stop on Lee Highway. May also be reached by Falls Church bus from Twelfth Street and Pennsylvania Avenue NW., or by auto via Georgetown, Key Bridge, Rosslyn, and Lee Highway. Telephone, Falls Church 144.

Horticultural Crops and Diseases.—Investigations of "yellows" and related diseases of strawberries. N. E. Stevens, senior pathologist, in charge. (Cooperation with Mycology and Disease Survey and the Louisiana Agricultural Experiment Station.)

Holland

Nansemond County Substation, State Agricultural Experiment Station (cooperative investigations).—On bus line from Blacksburg; plot is one-half mile northeast of Holland.

Horticultural Crops and Diseases.—Studies in the development of peanut seed stocks. E. T. Batten, superintendent of the station, in local charge.

Rosslyn

Arlington Experiment Farm.—Field laboratory of the Bureau of Plant Industry and several other bureaus of the Department of Agriculture. About 2 miles southwest of Washington, D. C. May be reached by auto or Arlington Farm bus, which makes four trips daily from the Department of Agriculture in Washington. E. C. Butterfield, senior horticulturist and superintendent, may be reached by telephone from Washington, National 4645, branch 440.

Biophysical Laboratory.—Maize heredity studies; experiments with paper mulch. Directed from Washington, D. C.; G. N. Collins, principal botanist, in charge.

Cereal Crops and Diseases.—General agronomic investigations on fall-sown wheat, rye, barley, and oats. J. W. Taylor, associate agronomist, in charge. Telephone, National 4645, branch 97–2. General cereal disease investigations, especially smuts, virus studies, and the physiology of disease resistance. Directed

from Washington, D. C.; A. G. Johnson, principal pathologist, in charge.

Wheat investigations, including the testing of standard varieties and of strains originated by breeding; breeding experiments to improve varieties, including resistance to leaf rust; studies of the inheritance of various characters in the wheat plant; and physiological experiments on the effect of seed treatments and on various reactions in the growth of the plant. C. E. Leighty, principal agronomist, and W. J. Sando, associate agronomist, in charge.

Investigations of the relative yielding power of the different varieties and strains of fall-sown oats, of varietal competition among the more distinct types of winter oats, of the development of hardier strains by hybridization and subsequent selection, of variation in the Fulghum variety when sown in the fall, and of whether the so-called false wild oat in the Fulghum variety results from mutation or from natural crossing. T. R. Stanton, senior agronomist, and F. A. Coffman, associate agronomist, in charge.

Agronomic investigations of winter barley, including extensive varietal comparisons of domestic and introduced material, breeding and selection studies with special reference to winter-hardiness and to utilization under southern conditions, studies on the effect of length of the light period, and the effect on germination and stand caused by seed treatments to control barley smuts. H. V. Harlan, principal agronomist, and M. N. Pope, associate agronomist, in charge.

Study of effect of length of day on domestic and introduced varieties of rice (in dark houses); growing introduced rice varieties in the greenhouse, under detention, to determine their freedom from disease and the effect of disease-control measures: growing perennial rices under controlled conditions in the greenhouse. C. E. Chambliss, associate agronomist, in charge.

Investigations of rye, including varietal experiments with standard varieties and strains developed by selection; breeding experiments, especially for resistance to leaf rust; studies on the fertilization of the rye plant, with special reference to the problem of self-sterility; and genetic studies on resistance (or susceptibility) to leaf rust and on wheat-rye hybrids. C. E. Leighty, principal agronomist, in charge.

Breeding and genetic studies on corn, including the principles of corn breeding and the mode of inheritance of smut resistance, chlorophyll deficiencies, endosperm defects, and other heritable characters, and studies of the relation of certain characteristics to yield and quality of crop. F. D. Richey, senior agronomist, in charge; assisted by G. F. Sprague, assistant agronomist.

Field and greenhouse studies on the control of oat smuts. V. F. Tapke, pathologist, in charge.

Field and greenhouse studies on the rôle of moisture and other physiological factors in the infection of wheat by loose smut and of oats by loose and covered smuts. V. F. Tapke, pathologist, in charge.

Investigations in greenhouse and field on the susceptibility of barley to several strains of loose smut under different conditions of inoculation. Marion G. Zehner, assistant pathologist, in charge.

Investigations with covered smut of barley in the greenhouse and field on methods of infection, on varietal resistance, and on smut control and the effect on yield. Marion G. Zehner, assistant pathologist, and J. W. Taylor, associate agronomist, in charge.

Infection studies with corn smut under greenhouse and field conditions. Marion G. Zehner, assistant pathologist, in charge.

Physiologic investigations on the nature of resistance and susceptibility of corn to smut, the reaction of the smut organism to environ-

mental conditions, and the differentiation of physiologic forms. E. R. Ranker, associate physiologist, in charge.

Greenhouse and field studies of seed treatments for the control of seed-borne cereal diseases other than smuts; studies of sorghum root rot; and studies on the longevity of the organism causing the nematode disease of wheat and rye. R. W. Leukel, associate pathologist, in charge. Telephone, National 4645, branch 97–1.

Investigations in laboratory, greenhouse, and field on the nature, cause, and control of the virus or mosaic diseases of cereals and other plants. H. H. McKinney, senior pathologist, in charge. Telephone, National 4645, branch 97–1.

Studies of some of the constituents of plant sap from the different cereals; effects of varying environmental conditions; comparisons between varieties with special reference to their relative degrees of disease resistance; changes accompanying the development of the plants through the different growth periods, etc. Annie M. Hurd-Karrer, associate physiologist, in charge.

Drug and Related Plants.—Experimental culture of plants yielding drugs, essential oils, vegetable oils, and related products. A. F. Sievers, senior biochemist, in charge.

Fiber Plants.—Hemp investigations, breeding improved strains of hemp, and production of seed for experimental purposes. L. H. Dewey, senior botanist, in charge.

Forage Crops and Diseases.—Investigations of cowpeas, soybeans, and velvetbeans, quantity production of seeds of desirable strains; development of improved varieties through selection; testing new varieties; growing in quantity new and rare varieties of soybeans, cowpeas, and Korean lespedeza for dissemination throughout the country. W. J. Morse, senior agronomist, in charge.

Clover investigations; quantity production of seeds of desirable species; testing new species; cultural studies. A. J. Pieters, senior agronomist, in charge.

Melilotus (sweetclover) investigations; testing new varieties; breeding strains adapted to special uses such as pasture and hay; cultural and fertilizer tests with sweetclover. L. W. Kephart, senior agronomist, in charge.

Turf investigations, including quantity production of stolons of desirable strains of creeping bent for use on golf courses; testing various grasses for suitability for golf-turf purposes; studies of cultural treatment of golf turf; alfalfa investigations, including development of superior varieties through selection. R. A. Oakley, principal agronomist, in charge.

Grass investigations, chiefly tests of different standard and newly introduced grasses in nursery rows for comparison as to their suitability for hay and pasture. H. N. Vinall, senior agronomist, in charge.

Horticultural Crops and Diseases.—Fruit production investigations, mainly systematic and varietal studies. J. R. Magness, principal pomologist, in charge.

Grape investigations, including studies of varieties and varietal adaptability. J. R. Magness, principal pomologist, in charge.

Fruit and vegetable utilization investigations, including studies of unfermented fruit juices and their preparation, the fundamental principles underlying canning, and the adaptability of fruit and vegetable varieties for different methods of utilization. J. S. Caldwell, senior physiologist, in charge.

Cold storage laboratory, operated in connection with studies of fruit and vegetable storage and transportation and the physiological response of fruits and vegetables to different storage conditions. L. A. Hawkins, principal physiologist, in charge.

Truck crop investigations, including sweetpotato improvement, maintenance of a systematic collection of varieties, handling, curing, and storing; improvement of tomato, lettuce, and cauliflower varieties by selection, especially for forcing. V. R. Boswell, senior horticulturist, in charge.

Vegetable standardization investigations, including improvement and studies in trueness to type. V. R. Boswell, senior horticulturist, in charge.

Potato investigations, including effect of different storage conditions on the vitality of seed. William Stuart, senior horticulturist, in charge.

Nut-culture investigations. J. R. Magness, principal pomologist, in charge.

Nursery-stock investigations. J. R. Magness, principal pomologist, in charge.

Bulb-culture investigations, including methods of growing, propagation, and curing, also adaptability. David Griffiths, senior horticulturist, in charge.

Landscape gardening and floriculture investigations, including studies of plant material represented by a rose garden and extensive collections of irises, peonies, hardy chrysanthemums, and other plants. F. L. Mulford, associate horticulturist, in charge.

Field experiments in connection with investigations of diseases of sweetpotatoes; greenhouse and field experiments in connection with the study of bean diseases; breeding disease-resistant varieties of beans. L. L. Harter, senior pathologist, in charge.

Breeding tomatoes and eggplants for disease resistance and production of stock seed of new varieties for distribution; investigation of methods for control of tomato diseases; breeding cucumbers for resistance to wilt disease and to the mosaic disease. F. J. Pritchard, senior pathologist, in charge.

Investigations of storage diseases of vegetables and gladiolus bulbs and effect of tempera-

ture and humidity conditions in relation thereto. J. I. Lauritzen, pathologist, in charge.

Field experiments in connection with investigations of diseases of ornamental plants. Freeman Weiss, pathologist, in charge.

Field experiments in connection with investigations of cucurbit diseases. W. W. Gilbert, senior pathologist, in charge.

Pathological studies and experiments, in orchard and greenhouse, of various diseases of deciduous fruit and nut trees; breeding fruits for disease resistance with special reference to the development of superior varieties of pears resistant to blight. M. B. Waite, principal pathologist, in charge. Work on this and the following projects directed from Washington, D. C.

Field and greenhouse experiments on crown gall of the apple. M. B. Waite, principal pathologist, and E. A. Siegler, pathologist, in charge.

Field and greenhouse investigations of blackberry diseases; also studies of diseases of strawberries and of the currant cane-blight fungus. N. E. Stevens, senior pathologist, in charge.

Preliminary tests to determine the efficacy of chemicals and combinations of chemicals as prospective fungicides. J. W. Roberts, senior pathologist, in charge.

Mycology and Disease Survey.—Investigations on mushroom diseases and culture, including the development of new and improved methods of mushroom culture as disease-preventive measures, the study of diseases attacking the crop and development of control measures; studies and experiments in the growing of additional species under artificial conditions as substitute crops where diseases are prevalent. E. B. Lambert, associate pathologist, in charge.

Sugar Plants.—Experiments on the transmission of diseases of sugarcane and sugar

beets; growing sugarcane plants in quarantine previous to shipping to various foreign countries; and growing sugarcane seedlings from imported seed. E. W. Brandes, principal pathologist, in charge.

Tobacco and Plant Nutrition.—Plant-nutrition investigations, including effect of length of day on plant growth. Work directed from Washington, D. C.; W. W. Garner, principal physiologist, in charge.

The following bureaus of the Department of Agriculture also conduct work at the Arlington Experiment Farm: Bureau of Chemistry and Soils, Bureau of Entomology, Bureau of Home Economics, Bureau of Public Roads, and the Food, Drug, and Insecticide Administration.

WASHINGTON

Bellingham

United States Bellingham Bulb Station.—Two miles north of Bellingham; bus service every hour from Union Bus Station to the field station. Bellingham is on the Great Northern, Northern Pacific, and Chicago, Milwaukee, St. Paul & Pacific Railroads.

Horticultural Crops and Diseases.—Bulb-culture investigations, particularly tulips, including cultural requirements and methods of handling many different bulbous plants, such as hyacinths, narcissus, and lilies. David Griffiths, horticulturist, in charge. Work directed from Washington, D. C., with occasional field trips; local supervision by B. L. Peters, senior scientific aid.

Prosser

Irrigation Branch Station, State Agricultural Experiment Station (cooperative investigations).—Prosser is on the Northern Pacific Railway. Telephone H. P. Singleton, acting superintendent, regarding instructions for reaching the station.

Forage Crops and Diseases.—Agronomic investigations with alfalfa varieties and pasture investigations, both under irrigation. Local supervision of the work by H. P. Singleton, acting superintendent.

Western Irrigation Agriculture.—Investigations on rate of penetration of irrigation water, the water-holding capacity of the soil, and the movement of soluble salts in the soil as influenced by various methods of irrigation and as affecting field crops. C. C. Wright, assistant agronomist, in charge.

Pullman

State Agricultural Experiment Station (cooperative investigations).—About 1¼ miles from Northern Pacific Railway and Oregon-Washington Railroad & Navigation stations. May be reached by bus. Pullman may also be reached by bus (five daily) from Spokane.

Cereal Crops and Diseases.—Investigations of varietal resistance of wheat to stinking smut (bunt), and hybridization for development of bunt-resistant wheats. E. F. Gaines, agent and cereal breeder, in charge. Telephone, 365–W.

Investigation of smuts of wheat, including number and distribution of physiologic forms, and methods of control. H. H. Flor, agent, in charge.

Forage Crops and Diseases.—Investigations with alfalfa and grasses adapted to dry-land conditions. O. E. Barbee, agent, in charge.

Spokane

Blister Rust Control Field Office.—Room 618, Realty Building, 242 Riverside Avenue. Two blocks north of Northern Pacific Railway station and four blocks southeast of Union Station. Telephone, Main 1715.

Blister Rust Control.—Field direction of cooperative blister rust control activities in the Northwestern and Pacific Coast States. S. N. Wyckoff, senior pathologist, in charge. Mr. Wyckoff's address and telephone are listed in the directory.

Wenatchee

United States Fruit Disease Field Laboratory.—In courthouse annex, about six blocks from railroad station (Great Northern Railway). Telephone, 5915.

Horticultural Crops and Diseases.—Investigations of pear and apple diseases which occur in irrigated regions. D. F. Fisher, senior pathologist, in charge.

Investigations in fruit and vegetable transportation, handling, and storage, including studies covering the important commercial apple-producing regions of the country on degree of maturity and other characteristics of the fruit in relation to handling and storage, and rates at which apples soften in storage; studies on chilling and storage of berries; studies on peach and plum maturity in relation to the handling and storage of these fruits; extensive investigations on the removal of spray residue from deciduous fruits. H. C. Diehl, associate physiologist, in charge.

WEST VIRGINIA

Lakin

Lakin Substation, State Agricultural Experiment Station (cooperative investigations).—Within walking distance of railroad station at Lakin, which is on the Baltimore & Ohio Railroad. No telephone.

Tobacco and Plant Nutrition.—Improvement in methods of curing tobacco and development of improved strains of Burley which are more productive and resistant to root rot. T. C. McIlvaine, agent, in charge.

WISCONSIN

Madison

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office in State Capitol annex, about three blocks from railroad station; may be reached on foot or by street car. (Work conducted in cooperation with State Department of Agriculture.)

State Agricultural Experiment Station (cooperative investigations).—About 2½ miles west from Chicago & North Western Railway station. Take cars marked "Wingra Park" or "Monroe Street," which go out University Avenue within one block of Horticultural Building.

Cereal Crops and Diseases.—Investigations of pathologic and physiologic phases of wheat and barley scab and related rot diseases of corn; also studies on control of Helminthosporium diseases of barley. J. G. Dickson, agent and pathologist, in charge. Telephone, Badger 580, University 215–J.

Fiber Plants.—Experiments in cultivation of varieties of hemp and general work for promotion of the hemp industry in Wisconsin. A. H. Wright, agent, in charge. In Agronomy Building.

Forage Crops and Diseases.—Investigations of forage-crop diseases and methods for their control; laboratory, greenhouse, and field studies of alfalfa wilt and other forage-crop diseases of outstanding importance. F. R. Jones, senior pathologist, in charge.

Forest Pathology.—Investigations of diseases of structural timber and forest products in cooperation with United States Forest Products Laboratory and University of Wisconsin. C. Audrey Richards, pathologist, in charge. In old Soils Building.

Horticultural Crops and Diseases.—Investigations of onion and cabbage diseases and breeding of yellows-resistant cabbage. J. C. Walker, agent, in charge. In Horticultural Building Telephone, Badger 580, University 234–W.

Investigations of mosaic diseases of vegetable crops. S. P. Doolittle, senior pathologist, in charge. In Horticultural Building. Telephone, Badger 580, University 234–W. (Activities centered at Madison from June to December; at Bradenton, Fla., balance of year.)

Breeding disease-resistant beans and investigation of bean diseases. R. A. Brink, collaborator, in charge.

Investigations of diseases of celery, lettuce, and miscellaneous truck crops. A. C. Foster, senior pathologist, in charge. In Horticultural Building.

Studies in connection with vegetable variety type bookwork on cabbage. J. C. Walker, agent, in charge. (Plots located near Racine, Wis.) Telephone, Badger 580, University 234–W.

Tobacco and Plant Nutrition.—Laboratory and field investigations of diseases of tobacco; improvement of tobacco by breeding. James Johnson, agent, in charge. In Horticultural Building. Telephone, Badger 580, University 296.

State Department of Agriculture.—Office of State entomologist, in State Capitol annex, about three blocks from railroad station. May be reached on foot or by street car.

Blister Rust Control.—Cooperative control of white-pine blister rust. E. L. Chambers, cooperator, in charge; H. J. Ninman, agent and State leader. May be reached at office of State entomologist.

Sturgeon Bay

Peninsular Branch Station, State Agricultural Experiment Station (cooperative investigations).—Sturgeon Bay is about 25 miles from

Green Bay, which is on the Chicago & North Western and the Chicago, Milwaukee, St. Paul & Pacific Railroads. The station is located about 4 miles north of Sturgeon Bay and is reached from the latter place by bus going out State Road No. 17.

Horticultural Crops and Diseases.—Studies in connection with vegetable variety type bookwork on peas. E. J. Delwiche, collaborator, in charge. P. O. address, Green Bay, Wis.

Wisconsin Rapids

Cranberry Laboratory, Wisconsin State Department of Agriculture (cooperative investigations).—Located at State Department of Agriculture. Wisconsin Rapids is on the Chicago, Milwaukee, St. Paul & Pacific Railroad.

Horticultural Crops and Diseases.—Investigations of cranberry diseases. H. F. Bain, senior pathologist, in charge.

WYOMING

Archer

Cheyenne Experiment Farm, State Agricultural Experiment Station (cooperative investigations).—One mile southeast of Archer (Union Pacific Railroad), and about 8 miles east of Cheyenne. Address, P. O. Box 298, Cheyenne. May be reached by telephone or auto from Cheyenne, near Lincoln Highway.

Dry-Land Agriculture.—Dry-land crop rotations and production. A. L. Nelson, associate agronomist and superintendent, in charge.

Cheyenne

United States Central Great Plains Field Station.—Six and one-half miles northwest of Cheyenne. No motor bus transportation be-

yond Fort Russell, which is 2 miles from the station. May be reached by auto from Cheyenne, or transportation arrangements may be made by communicating with Robert Wilson, the superintendent. Post-office address, box 1177, Cheyenne. Telephone, 2362.

Dry-Land Agriculture.—Variety testing; breeding and cultural experiments with fruits, ornamental plants, and garden vegetables; investigations and cooperative shelter-belt distribution with farmers; dry-land crop rotations and production. Robert Wilson, associate arboriculturist and superintendent, in charge.

Laramie

Barberry Eradication.—Campaign to locate and destroy the common barberry, which spreads the black stem rust of cereals. Office at College of Agriculture, about 1 mile from center of town; may be reached on foot or by conveyance. (Work conducted in cooperation with College of Agriculture, University of Wyoming.)

Sheridan

United States Dry-Land Field Station.—About 7 miles northeast of Sheridan, which is on the Chicago, Burlington & Quincy Railroad. Telephone R. S. Towle regarding transportation arrangements, calling 8505.

Dry-Land Agriculture.—Dry-land crop rotations and production; soil fertility investigations; shelter-belt investigations; and grazing and feeding investigations with cattle and swine, all in cooperation with the University of Wyoming. R. S. Towle, associate agronomist and superintendent, in charge.

Forage Crops and Diseases.—Agronomic investigations with alfalfa, bromegrass, field peas, millet, sweetclover, sorghum, Sudan grass, and root crops. Local supervision by R. S. Towle, associate agronomist and superintendent.

Worland

Washakie County Experiment Farm, State Agricultural Experiment Station (cooperative investigations).—Worland is on the Chicago, Burlington & Quincy Railroad. Telephone the superintendent regarding instructions for reaching the farm, which is located in Worland.

Drugs and Related Plants.—Field tests with safflower as an oilseed crop for the production of drying oils. Under direct supervision of J. F. Peterson, superintendent.

INDEX OF FIELD ACTIVITIES BY OFFICES